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VOLUME 1 of 3

RESULTS OF AN INVESTIGATION TO VERIFY SHUTTLE ORBITER VEHICLE 102 AERO CHARACTERISTICS UTILIZING AN .05-SCALE HI-FIDELITY REMOTE CONTROL MODEL (39-0) IN THE AMES RESEARCH CENTER UNITARY WIND TUNNEL (OA145C)

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by

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Prepared under NASA Contract Number NAS9-13247

by

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Engineering Analysis Division

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Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:	118-1-11, -97, -87
NASA Series Number:	OA145A, B, C
Model Number:	39-0
Test Dates:	March 7, 1977 through May 4, 1977
Occupancy Hours:	OA145A 480
	OA145B 348
	OA145C 100

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ABSTRACT

This report documents the data obtained in wind tunnel test ØA145C, part of a transonic verification test program (ØA145A,B,C) conducted in the Ames unitary plan tunnel. Data from tests ØA145A and B are documented in DMS-DR-2380 and DMS-DR-2364, respectively. The objective of this test series was to verify orbiter vehicle 102 aerodynamic characteristics with regard to:

1. Basic stability and control over the structural design envelope
2. Fine cut stability and control characteristics along a nominal entry trajectory
3. Control surface hinge moments
4. Reynolds number effects on stability and control, control surface effectiveness and hinge moments
5. Certain hysteresis and control surface interactions observed on other smaller scale model tests
6. Proposed inboard/outboard elevon interaction math model

Testing was conducted over a Mach number range 0.4 to 3.5 with Reynolds number variations between 3.0×10^6 and 9×10^6 per foot for subsonic/transonic tests and 1.0×10^6 to 4.5×10^6 per foot for supersonic

tests. The test program included investigations to evaluate model blockage, reflected shock and flow angularity effects in the 11 ft. and 9 x 7 tunnels. Mach ramps were run in the 11 ft. tunnel to help establish data validity near Mach 1.0. Control surface hinge moments were obtained from the integration of measured pressure data on all control surfaces.

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147	OA145C SPEED BRAKE CP VS. XR/CR OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25	742-750
148	OA145C SPEED BRAKE CP VS. XR/CR OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70	751-759

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149	OA145C SPEED BRAKE CP VS. XR/CR OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2	760-768
150	OA145C SPEED BRAKE CP VS. XR/CR OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0	769-777
151	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, ALPHA EFFECT AT SPDBRK = 55	778-780
152	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, ALPHA EFFECT AT SPDBRK = 25	781-783
153	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, ALPHA EFFECT AT SPDBRK = 70	784-786
154	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2	787-789
155	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, BETA EFFECT AT SPDBRK = 55	790-792
156	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, BETA EFFECT AT SPDBRK = 25	793-795
157	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, BETA EFFECT AT SPDBRK = 87.2	796-798
158	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, RUDDER EFFECT AT SPDBRK = 55	799-801
159	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, RUDDER EFFECT AT SPDBRK = 25	802-804
160	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, RUDDER EFFECT AT SPDBRK = 70	805-807

FIGURE NUMBER		PAGES
161	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2	808-810
162	OA145C SPEED BRAKE CP VS. ZR/BR INNER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0	811-813
163	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55	814-817
164	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25	818-821
165	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70	822-825
166	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2	826-829
167	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, BETA EFFECT AT SPDBRK = 55	830-833
168	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, BETA EFFECT AT SPDBRK = 25	834-837
169	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2	838-841
170	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55	842-845
171	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25	846-849
172	OA145C SPEED BRAKE CP VS. AR/BR OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70	850-853

FIGURE NUMBER		PAGES
173	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2	854-857
174	OA145C SPEED BRAKE CP VS. ZR/BR OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0	858-861

PLOTTED COEFFICIENT SCHEDULE:

(A) CL, CD, Cm, CA VS. α: CL VS. CD: CL VS. Cm

(B) CY, Cn, C_ℓ VS. β

(C) Ch_e, Ch_{e_ϕ}, Ch_{e_I}, $Ch_{FD\phi}$, Ch_{FDI}, vs. α

(D) Ch_{sb} VS. α

(E) Ch_{sb} VS. β

(F) CY, Cn, C_ℓ, Ch_{sb} VS. δr

(G) CL, CD, Cm, Che, Che_I, Ch_{FD_I} VS. δe_{IB}

(H) CL, CD, Cm, Che, Che_ϕ, $Ch_{FD\phi}$ VS. $\delta e_{\phi B}$

(I) CL, CD, Cm, CY, Cn, C_ℓ, Che_I, Che_ϕ VS. δa_{IB}

(J) CL, CD, Cm, CY, Cn, C_ℓ, Che_I, Che_ϕ VS. $\delta a_{\phi B}$

(K) CL, CD, Cm VS. δ_{BF}

(L) CY, Cn, C_ℓ VS δr

(M) Ch_e, Che_I, Che_ϕ VS β

(N) CY, Cn, C_ℓ VS. α

(O) CY, Cn, C_ℓ VS. δe

(P) C_L, C_D, C_m VS. δe

INTRODUCTION

An experimental investigation was performed to determine aerodynamic stability and control characteristics and control surface hinge moments on the OV102 configuration. The test article was an 0.05-scale representation of the SSV orbiter configuration (Model 39-0). Tests were performed in the NASA/ARC Unitary Plan Wind Tunnel. Nominal test conditions are given in Table I.

Six-component force data were measured on the complete model using the ARC 4-inch Task MKIVA balance sting mounted through the rear of the model. The model had a total of 280 pressure taps located as shown in Figures 2c through 2h. Control surface pressures were measured on the left hand elevon panels, the body flap and speed brake. These pressures were also integrated to obtain control surface hinge moments.

With the tunnel flowing, data were recorded through an angle-of-attack range from -10^{o} to $+30^{o}$ and an angle of sideslip range from -10^{o} to $+10^{o}$.

Control surfaces remotely actuated from the control room were: All four elevon panels, the body flap, and the rudder. Speed brake deflections were set manually using a pin indexing system on the rudder shaft.

The report consists of 3 volumes, 1 volume of plotted force data and plotted pressure data, 1 volume of tabulated force data, 1 volume of tabulated pressure data on microfiche. The volumes are arranged in the following manner:

VOLUME NUMBER	CONTENTS	MICROFICHE PAGE NO.
1	OA145C PLOTTED FORCE DATA	
	OA145C PLOTTED PRESSURE DATA	
2	OA145C TABULATED FORCE DATA	
3	OA145C TABULATED PRESSURE DATA	
	INBOARD ELEVON LOWER SURFACE	1-6
	OUTBOARD ELEVON LOWER SURFACE	6-11
	INBOARD ELEVON UPPER SURFACE	11-22
	OUTBOARD ELEVON UPPER SURFACE	22-34
	INBOARD FLIPPER DOOR UPPER SURFACE	34-38
	OUTBOARD FLIPPER DOOR UPPER SURFACE	38-42
	BODY FLAP UPPER SURFACE	43-47
	BODY FLAP LOWER SURFACE	47-51
	RUDDER OUTER SURFACE	51-56
	RUDDER INNER SURFACE	56-60
	ORBITER BASE	61-63
	STING LOWER SURFACE	63-64
	STING UPPER SURFACE	64-66

NOMENCLATURE

PLOT SYMBOL	MNEMONIC	DEFINITION
a		speed of sound; m/sec,ft/sec
A_{B_K}		fuselage base area assigned to pressure tap K, $ft.^2$
A_C		fuselage base sting cavity area, $ft.^2$
A_i		upper control surface area assigned to pressure tap i, $in.^2$
A_j		lower control surface area assigned to pressure tap j, $in.^2$
A_m		speed brake outer surface area assigned to pressure tap m, $in.^2$
A_n		speed brake inner surface area assigned to pressure tap n, $in.^2$
b_w		Wind reference span, in. Used to nondimensionalize yawing and rolling moments.
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b-p_\infty)/qS$
C_{AC}	CAC	Sting cavity axial force coefficient. Sting cavity pressure is adjusted to an average base pressure.
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_{AU}		axial force coefficient, unadjusted
c_{BF}		body flap reference chord length, in.
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$
C_{D_b}	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$

NOMENCLATURE (Continued)

PLOT SYMBOL	MNEMONIC	DEFINITION
c_E		elevon reference chord length, in.
c_{FD}		flipper door reference chord length, in.
$C_{h_{BF}}$	CHBF	body flap hinge moment coefficient
$C_{h_{EI}}$	CHEI	inboard elevon hinge moment coefficient
$C_{h_{EO}}$	CHEO	outboard elevon hinge moment coefficient
$C_{h_{FDI}}$	CHFDI	inboard flipper door hinge moment coefficient
$C_{h_{FDO}}$	CHFDO	outboard flipper door hinge moment coefficient
$C_{h_{SB}}$	CHSB	speed brake hinge moment coefficient
C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$
C_ℓ	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$
C_m	CIM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS\ell_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_p	CP	pressure coefficient; $(p_1 - p_\infty)/q$
c_W		wing reference MAC, in.
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
δ_a	AILRON	Aileron deflection. Positive when L.H. elevon is more trailing edge down than R.H. elevon, degrees.
δ_{BF}, δ_{bf}	BDFLAP	Body flap deflection. Positive trailing edge down, degrees.

PLOT SYMBOL	MNEMONIC	DEFINITION
δe	ELEVON	Elevon deflection, average of the four individual panel deflections. Positive trailing edge down, degrees.
$\delta e_{LI,\emptyset}$	ELV-LI,$\emptyset$	inboard and outboard L.H. elevon deflections, degrees
DELL	DELL	differential elevon setting, left side, outboard-inboard, degrees
DELR	DELR	differential elevon setting, right side, outboard-inboard, degrees
$\delta e_{RI,\emptyset}$	ELV-RI,$\emptyset$	inboard and outboard R.H. elevon deflections, degrees
δr	RUDDER	Rudder deflection in a water plane. Positive trailing edge left, degrees.
DRHL	DRHL	Rudder deflection normal to the hinge line. Positive trailing edge left, degrees.
δSB	SPDBRK	Speed brake deflection. Angle between the inside faces of the left and right panels, always positive, degrees.
H_{mBF}		body flap hinge moment, in-lbs
H_{mEI}		inboard elevon hinge moment, in-lbs
H_{mEO}		outboard elevon hinge moment, in-lbs
H_{MFDI}		inboard flipper door hinge moment, in.lbs
H_{MFDO}		outboard flipper door hinge moment, in.lbs
H_{MSB}		speed brake hinge moment, in-lbs
lB		orbiter body reference length, in.
L/D	L/D	lift-to-drag ratio; C_L/C_D
L/D_f	L/DF	lift-to-forebody drag ratio; C_L/C_{D_f}
M	MACH	Mach number; V/a

NOMENCLATURE (Continued)

PLOT SYMBOL	MNEMONIC	DEFINITION
p		pressure; N/m^2, psf
$P_{i,j,m,n}$		control surface static pressure corresponding to tap i, j, m or n, psfa
P_o	P	freestream static pressure psfa
q	Q(PSF) Q	dynamic pressure; $1/2\rho V^2$, psf
RN/L	RN/L, RN	unit Reynold's number; per m, per ft
S_{BF}		body flap reference area, $in.^2$
S_E		elevon reference area, $in.^2$
S_{FD}		flipper door reference area, $in.^2$
S_{SB}		speed brake reference area, $in.^2$
S_w		wing reference area, $ft.^2$
V		velocity; m/sec, ft/sec
x_{BF}/C_B	XBF/CB	chordwise distance aft of body flap hinge line as a fraction of body flap chord
X_{CG}		distance from orbiter nose (IML) to model moment reference center, in.
X_{CP}	XCP/L	model center of pressure location in the normal force direction, relative to the model nose (IML), in.
x_e/C_e	XE/CE	chordwise distance aft of elevon hinge line as a fraction of local elevon chord
x_{FD}/C_{FD}	XF/CF	chordwise distance aft of flipper door hinge line as a fraction of local flipper door chord
$X_{i,j,m,n}$		transfer distance from static pressure tap i, j, m or n to the corresponding control surface hinge line, in.

NOMENCLATURE (Concluded)

PLOT SYMBOL	MNEMONIC	DEFINITION
x_R/C_R	XR/CR	chordwise distance aft of rudder hinge line as a fraction of local rudder chord
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3, $slugs/ft^3$
η_{BF}	YBF/BB	spanwise distance from body flap left edge as a fraction of body flap span at hinge line
η_R	ZR/BR	spanwise distance from rudder bottom edge as a fraction of rudder span on hinge line
η_W	2Y/BW	distance from plane of symmetry as a fraction of wing semi-span

REMARKS

After completion of the OA145 test program, pressure data for all three program phases were reviewed to determine what updating, corrections, or substitutions would be necessary. The following defines for each program phase those corrections that were deemed necessary and were made to the final data prior to preparation of the final data tape for Dataman. Updating and substitutions were applied only where known deficiencies existed that would have severely compromised the final data.

PRESSURE DATA UPDATING FOR 118-1-11 (OA145A)

Run 18 through 56:16

Deleted	SV	Port(s)
	1	3, 4, 5, 8 through 11, 17, 18
	3	18
	7	2, 6, 24
	9	19, 20

Applied
Tap 127 (SV3-Port 13) Pressure to Tap 132 (SV3-Port 18)
Tap 6 (SV6-Port 2) Pressure to Tap 7 (SV7-Port 2)
Tap 216 (SV7-Port 3) Pressure to Tap 219 (SV7-Port 6)
Tap 240 (SV8-Port 3) Pressure to Tap 207 (SV7-Port 24)
Tap 403 (SV9-Port 18) Pressure to Tap 404 (SV9-Port 19)
Tap 403 (SV9-Port 18) Pressure to Tap 405 (SV9-Port 20)

Run 50:13 through 56:16

Replaced SV8 CAL with SV9 CAL.

Run 60:1 through 74:11

Deleted	SV	Port(s)
	1	3, 5, 8 through 11, 17
	4	2
	7	6, 24
	9	19, 20

Applied Tap 5 (SV5-Port 2) Pressure to Tap 4 (SV4-Port 2)
Tap 216 (SV7-Port 3) Pressure to Tap 219 (SV7-Port 6)
Tap 240 (SV8-Port 3) Pressure to Tap 237 (SV7-Port 24)
Tap 403 (SV9-Port 18) Pressure to Tap 404 (SV9-Port 17)
Tap 403 (SV9-Port 18) Pressure to Tap 405 (SV9-Port 19)

Run 76:1 through 272:9

Deleted	SV	Port(s)
	1	3, 8, through 11, 17
	7	6, 24
	9	19, 20, 24

Applied Tap 216 (SV7-Port 3) Pressure to Tap 219 (SV7-Port 6)
Tap 240 (SV8-Port 3) Pressure to Tap 237 (SV7-Port 24)
Tap 403 (SV9-Port 18) Pressure to Tap 404 (SV9-Port 19)
Tap 403 (SV9-Port 18) Pressure to Tap 405 (SV9-Port 20)
Tap 408 (SV9-Port 23) Pressure to Tap 409 (SV9-Port 24)

Run 67:1 through 341:10

Replaced SV8 CAL with SV9 CAL

Run 185:1 through 272:9

Deleted	SV	Port
	1	5

Applied Tap 35 (SV1-Port 11) Pressure to Tap 25 (SV1-Port 5)

Run 276:1 through 396:10

Deleted	SV	Port(s)
	7	6, 24
	9	19, 20, 24

Applied Tap 216 (SV7-Port 3) Pressure to Tap 219 (SV7-Port 6)
Tap 240 (SV8-Port 3) Pressure to Tap 237 (SV7-Port 24)
Tap 403 (SV9-Port 18) Pressure to Tap 404 (SV9-Port 19)
Tap 403 (SV9-Port 18) Pressure to Tap 405 (SV9-Port 20)
Tap 408 (SV9-Port 23) Pressure to Tap 409 (SV9-Port 24)

Run 370:1 through 384

Deleted SV6 Port 2

Applied Tap 5 (SV5-Port 2) Pressure to Tap 6 (SV6-Port 2)

Run 403 through 918:10

Deleted SV7 Ports 6 and 24

Applied Tap 216 (SV7-Port 2) Pressure to Tap 218 (SV7-Port 6)
Tap 240 (SV8-Port 3) Pressure to Tap 237 (SV7-Port 24)

Run 514 through 534:10

Deleted SV6 Port 2

Applied Taps (SV5-Port 2) Pressure to Tap 6 (SV6-Port 2)

Run 735 through 756:10

Deleted SV2 Port 7

Applied Tap 65 (SV1-Port 25) Pressure to Tap 75 (SV2-Port 7)

Run 874 through 895:8

Deleted SV2 Port 7

Applied Tap 65 (SV1-Port 25) Pressure to Tap 75 (SV2-Port 7)

PRESSURE DATA UPDATING FOR 118-1-97 (OA145B)

Run 156:7 through 337 (End of 5/4/77 running)

Deleted	SV	Port(s)
	3	8
	7	24

Applied Tap 117 (SV3-Port 3) Pressure to Tap 122 (SV3-Port 8)
Tap 240 (SV8-Port 3) Pressure to Tap 237 (SV7-Port 24)

Run 340 through 391 (End of test)

Deleted	SV	Port
	7	24

Applied Tap 240 (SV8-Port 3) Pressure to Tap 237 (SV7-Port 24)

P_{BASE} for following runs is lost; substitute as follows:

For Run 228 Substitute P_B from Run 200 Seq. 6
For Run 229 Substitute P_B from Run 200 Seq. 18

PRESSURE DATA UPDATING FOR 118-1-87 (OA145C)

Run 13 through 97

Deleted	SV	Port(s)
	3	8
	7	24

Applied Tap 117 (SV3-Port 3) Pressure to Tap 122 (SV3-Port 8)
Tap 240 (SV8-Port 3) Pressure to Tap 237 (SV7-Port 24)

Run 82 through 96

Deleted SV8 Port 2

Applied Tap 7 (SV7-Port 2) Pressure to Tap 8 (SV8-Port 2)

Run 98 through 188

Deleted SV7 Port 24

Applied Tap 240 (SV8-Port 3) Pressure to Tap 237 (SV7-Port 24)

Run 100 through 188

Deleted SV3 Port 8

Applied Tap 117 (SV3-Port 3) Pressure to Tap 122 (SV3-Port 8)

It should be noted that for the OA145A program aerodynamic coefficient data presented between freestream Mach numbers of about 0.98 and 1.07 may be suspect. Measured aerodynamic characteristics are affected by tunnel wall blockage and/or reflected shock waves. Therefore, data in this Mach range should be used with caution for diagnostic

analysis only. Review of the base pressure data for the OA145C test program revealed significant differences in P_{BASE} between individual pressure taps and are a result of response time problems associated with Scanivalve stepping from the calibrate pressure Port #1 (high positive pressure) to the adjacent (low negative value) base pressure Port #2, on all Scanivalves. For base pressures measured on two adjacent ports, i.e., CP_{B10} and CP_{B11} on Scanivalve 11 the second pressure reads the correct value of P_{BASE}. It was therefore concluded that only Port #2 on each Scanivalve, the base pressure tap, is in error. This anomaly was not discovered until after release of the final data tape to Dataman.

Pressure data used for the DATAMAN integrations for control surface hinge moments (documented as special request SPRT9F) were edited further by DATAMAN to exclude taps designated by Rockwell as bad or suspect. The following is a list of the pressure taps deleted by DATAMAN in accordance with the integration request:

Tap No.	Component	Tap Location
132	Elevon Upper Surface	$\eta_W = 0.8$, $X_e/C_e = 0.2$
155	Elevon Lower Surface	$\eta_W = 0.34$, $X_e/C_e = 0.6$
209	Flipper Door Upper Surface	$\eta_W = 0.534$, $X_F/C_F = 0.9$
215	Flipper Door Upper Surface	$\eta_W = 0.715$, $X_F/C_F = 0.9$
219-221	Flipper Door Upper Surface	$\eta_W = 0.887$, all X_F/C_F
325	Body Flap Lower Surface	centerline @ T. E.

REMARKS (concluded)

Hinge moment data presented in this report are the on line integration results from the test facility. Pressure data tabulated in volume 3 are also facility data.

CONFIGURATIONS INVESTIGATED

The test article (provided by Rockwell) was a 0.05-scale model 39-0 defined by the VC70-000002B configuration control drawing and fabricated to the March 15, 1976 trajectory 14414.1C/C Numerical Control Lines.

The model was constructed primarily of 6061-T6 aluminum alloy and Armco 17-4 stainless steel. The balance block, wing panels and elevons, vertical tail and speed brakes, and body flap are the principal steel components. The fuselage is all aluminum.

The model was tested in the above fixed configuration in all three facilities. No model boundary layer trips were employed for any testing. The only configuration variables were model orientation and control surface deflection. The following range of control surface deflections were tested and controlled remotely from the control room: Elevon deflections of -35° to $+20^{\circ}$, body flap deflections of -11.7 to 22.5 and -22.8 to +22.8 rudder deflection. Speed brake deflections of 0°, 7.5, 15°, 25°, 40°, 55°, 70° and 87.2° were set manually.

The following nomenclature was used to designate the model components:

Component	Definition
B_{75}	OV102 fuselage including T-zero umbilical panels, crew hatch, and cargo bay door gaps.
C_{16}	Canopy including recessed windshields and observation windows.
E_{64}	Elevons, including elevon/elevon and elevon/fuselage gaps.
F_{16}	Body flap.

CONFIGURATIONS INVESTIGATED(Concluded)

Component	Definition
FD_3	Flipper doors.
FR_{22}	Fairings for the forward cargo bay door hinges, 6 per side.
HG_1	Cargo bay door hinges, 13 per side.
M_{52}	OMS pods.
N_{108}	Forward RCS thruster nozzle ports.
N_{109}	Main propulsion system nozzles (inner surfaces cut away for sting clearance).
N_{110}	OMS nozzles.
N_{111}	Aft RCS thruster nozzles and ports.
R_{20}	Rudder, split into left and right speed brake panels.
V_{27}	Vertical tail.
VT_{10}	Cargo bay vents, 4 per side.
VT_{11}	wing/landing gear bay vents, 1 per side.
VT_{12}	Cabin vents, 1 per side.
VT_{13}	Forward RCS vents, 1 per side.
VT_{14}	Aft fuselage vents, 1 per side.
VT_{15}	OMS RCS vents, 1 per side.
VT_{16}	Flipper door vents.
VT_{17}	Miscellaneous vents, ports and penetrations.
W_{131}	OV102 wing.

The above nomenclature is depicted in Figures 2a and 2b.

INSTRUMENTATION

The test was conducted with the following model instrumentation:

1. 4.0-inch Task MKIVA, 6-component internal balance.
2. Eleven Scanco S-type, 48-port Scanivalves for model pressures. One Scanivalve for sting pressures.
3. 36 wing and 97 elevon static pressure taps.
4. 32 flipper door static pressures, 24 external, 8 internal
5. 5 aft fuselage and 23 body flap static pressure taps.
6. 9 vertical tail and 45 speed brake static pressure taps.
7. 9 fuselage base and 2 balance cavity static pressure taps.
8. 2 air data probe forward fuselage flush static pressure taps.
9. 20 sting static pressure taps.

Six model control surfaces were remotely actuated. Included were the following instrumentation:

1. Hydraulic actuation systems for the four elevon panels and the body flap.
2. Electric motor actuation system for the rudder.
3. Angular position pots for each of the control surfaces.
4. A model mounted hydraulic supply system, including pump, and servo-control valves.
5. A model control console housing the electrical components of the servo systems.

Force data for the orbiter was measured by a six-component balance, sting mounted through the rear of the model. The primary balance for this test was the ARC 4-inch Task MKIVA and the backup balance was the Task MK VI provided by Rockwell.

The model was instrumented with a total of 280 static pressure taps. These pressures were measured by eleven model mounted S-type Scanivalves provided by Rockwell International.

The sting was instrumented with 20 static pressure taps, 10 each top and bottom spaced every 2 inches aft of the base. These pressures were measured by a single S-type Scanivalve mounted in the tunnel strut BOR. The Scanivalve was provided by Rockwell International.

All pressure instrumentation electrical leads were supplied by Rockwell International. ARC provided reference, calibrate, and backing pressure tubes from their source to the aft end of the model. The routing of all instrumentation leads was internal to the sting, except for the sting static taps.

The locations and tap identification numbers of all orifices are shown in Tables III through VI and Figures 2c through 2h.

Tunnel wall static pressure, measured upstream of the test section, was used as the reference pressure for all Scanivalves.

The four elevon panels and the body flap were remotely controlled using a model mounted hydraulic servo control system. The hydraulic system consisted of 1 H.P. AC motor, pump and reservoir, Moog Type 30 servovalves, and Oildyne Style A hydraulic cylinders. The electrical components of the servo-system, the operational amplifiers and balancing pots, were contained in a model control console located in the control room.

The rudder panels were remotely controlled using a Globe planetary gear motor, Type 8L. An electrical servo system for the rudder, utilizing a Moog amplifier, was built into the model control console.

Control surface angular position was read by rotary pots located as closely as possible to each surface hingeline. The pots for the inboard elevon panels and the body flap were 7/8-inch Beckman Helipots, model 6173 single turn, dual element. The pots for the outboard elevons and rudder panels were 1/2-inch Markite Series RM05 pots, also single turn, dual element.

The dual outputs from each pot allowed one output to be utilized as the feedback element in the control servo loop, with the second output being used to set control position and compute surface positions in the data reduction program.

The model control console was operated manually. Unbalancing of the servo to set a given control deflection was accomplished by manually adjusting the Helipots on the control console. The position of each control surface was read by separate digital voltmeters mounted on the console.

TEST FACILITIES DESCRIPTION

Ames 11 x 11-Foot Transonic (ØA145A)

The Ames 11 x 11-Foot Transonic Wind Tunnel is a variable density, closed return, continuous flow type. This tunnel has an adjustable nozzle (two flexible walls) and a slotted test section to permit transonic testing over a Mach number range continuously variable from 0.4 to 1.4.

Ames 8 x 7-Foot Supersonic (ØA145C)

The Ames 8 x 7-Foot Supersonic Wind Tunnel is a closed-return, variable-density tunnel with a 8- by 7-foot rectangular test section. The nozzle has flexible side walls with fixed upper and lower surfaces. Mach number range is continuously variable from 2.45 to 3.5. Tunnel stagnation pressure can be varied from 0.3 to 2.0 atmospheres and Reynold's number per foot varies from 1.0×10^6 to 5.0×10^6.

Ames 9 x 7-Foot Supersonic (ØA145B)

The Ames 9 x 7-Foot Supersonic Wind Tunnel is a variable density, continuous flow type with an adjustable nozzle to permit supersonic testing over a Mach number range continuously variable from 1.5 to 2.5. The nozzle is of the asymmetric, sliding-block type in which the variation of the test section Mach number is achieved by translating, in the streamwise direction, the fixed-contour block that forms the floor of the nozzle.

DATA REDUCTION

Model force and moment data was reduced to coefficient form in both body and stability axes systems. Moment data was reduced about a moment reference center corresponding to 65% of the reference body length at W.L. 375. Model angle of attack and sideslip were corrected for support hardware deflections and tunnel flow angularity. Angle-of-attack flow angularity was determined from upright and inverted model runs at the beginning of the test. Standard facility corrections were applied as required. All model pressure data was reduced to the pressure coefficient form $(P-P_o)/q$.

Six-component body axes data was computed from balance outputs with axial force being adjusted for the differences between the average sting cavity pressure and an average base pressure.

$$C_A = C_{A_U} - C_{A_C}$$

where:

$$C_{A_C} = -(C_{P_{Cavg.}} - C_{P_{Bavg.}}) \frac{(A_c)}{S_w}$$

$$C_{P_{Cavg.}} = \frac{C_{P10} + C_{P11}}{2}$$

$$C_{P_{Bavg.}} = \frac{(C_{P1} + C_{P2} + C_{P5} + C_{P6} + C_{P7} + C_{P8})}{6}$$

Forebody axial force coefficients were computed by adjusting the base pressure to freestream.

$$C_{A_F} = C_A - C_{A_B}$$

where:

$$C_{A_B} = \frac{-1}{S_w}\left[\sum_{K=1}^{9} (C_{P_K} A_{B_K}) + (C_{P_{Bavg.}} A_C)\right]$$

Center-of-pressure location of the model normal force was computed as a ratio to the reference body length.

$$\frac{X_{CP}}{lB} = \frac{1}{lB}\left(X_{CG} - \frac{C_m}{C_N}\bar{c}\right)$$

Stability axes coefficients C_L and C_D were computed from body axes coefficients C_N and C_A. Model lift-to-drag ratio was then computed from C_L and C_D.

$$L/D = C_L/C_D$$

Model control surface positions from the run schedule were input to the controller manually, i.e., constant or variable values were input depending on the sweep variable for the given run. Table look up values of δ_e, δ_{BF}, and δ_A, based on calibration data, were stored in the data reduction program and employed to determine control surface position from the actual set values of controller voltages input to the ARC instrumentation system.

Model control surface hinge moments (on line data only) were computed by the facility from control surface pressures using an area-moment arm method as detailed below:

$$H_{MEI} = \sum_{I=101}^{124} \left|(P_i)\ (A_i)\ (x_i)\right| - \sum_{J=150}^{173} \left|(P_j)\ (A_j)\ (x_j)\right|$$

$$C_{HEI} = \frac{H_{MEI}}{qS_E C_E}$$

$$H_{MEO} = \sum_{i=125}^{149} \left[(P_i)\ (A_i)\ (x_i)\right] - \sum_{J=174}^{197} \left[(P_j)\ (A_j)\ (x_j)\right]$$

$$C_{HEO} = \frac{H_{MEO}}{qS_E C_E}$$

Inboard flipper door

$$H_{MFDI} = \sum_{i=201}^{212} \left[(P_i)\ (A_i)\ (x_i)\right] - \sum_{j=225}^{236} \left[(P_j)\ (A_j)\ (x_j)\right]$$

$$Ch_{FDI} = \frac{H_{MFDI}}{qS_{FD} C_{FD}}$$

Outboard flipper door

$$H_{MFDO} = \sum_{i=213}^{224} \left[(P_i)\ (A_i)\ (x_i)\right] - \sum_{j=237}^{248} \left[(P_j)\ (A_j)\ (x_j)\right]$$

$$Ch_{FDO} = \frac{H_{MFDO}}{qS_{FD} C_{FD}}$$

Body flap hinge moments

$$H_{MBF} = \sum_{i=301}^{307} \left[(P_i)\ (A_i)\ (x_i)\right] - \sum_{j=314}^{325} \left[(P_j)\ (A_j)\ (x_j)\right]$$

$$Ch_{BF} = \frac{H_{MBF}}{qS_{BF} C_{BF}}$$

where:

i = upper surface pressure tap numbers

j = lower surface pressure tap numbers

Speed brake hinge moments

$$H_{MSB} = \sum_{m=410}^{436} \left[(P_m)\ (A_m)\ (x_m)\right] - \sum_{n=437}^{454} \left[(P_n)\ (A_n)\ (x_n)\right]$$

$$Ch_{SB} = \frac{H_{MSB}}{qS_{SB}C_{SB}}$$

where:

m = outer surface pressure tap numbers

n = inner surface pressure tap numbers

Pressure coefficients judged to be incorrect were deleted and areas reassigned by manual input to the on-line computer program. Final hinge moment data were integrated by Dataman from plotted and smoothed pressure coefficient data.

The following flow angularity corrections were applied to the final data:

OA145A No flow angularity, blockage or wall corrections were applied to the data obtained in the 11 ft. transonic facility.

OA145B Flow angularity corrections based on comprehensive evaluations of "TACT" (Transonic Aircraft Technology) program test data were applied to the final data. These corrections represent large model values above and beyond standard facility corrections.

DATA REDUCTION (Continued)

OA145C Standard facility flow angularity corrections were applied to the data obtained in the 8 x 7 facility.

Reference dimensions and constants used were:

SYMBOL	DESCRIPTION	MODEL SCALE	FULL SCALE
S_W	Wing reference area, ft.^{2}	6.725	2690.
b_W	Wing reference span, in.	46.834	936.68
c_W	Wing reference MAC, in.	23.740	474.81
MRC	Moment Reference Center		
	X, in.	53.834	1076.68
	Y, in.	0.0	0.0
	Z, in.	18.75	375.0
X_{CG}	Length, nose IML to MRC, in.	41.934	838.68
lB	Body reference Length, in.	64.515	1290.3
S_E	Elevon reference area, in.^{2}	75.60	30240.
c_E	Elevon reference chord, in.	4.535	90.7
S_{FD}	Flipper door reference area, in.^{2}	75.60	30240.
c_{FD}	Flipper door reference chord, in	4.535	90.7
S_{BF}	Body flap reference area, in.^{2}	48.60	19440.
c_{BF}	Body flap reference chord, in.	4.050	81.0
S_{SB}	Speed brake reference area, in.^{2}	36.05	14421.6
c_{SB}	Speed brake reference chord, in.	3.660	73.2
A_C	Base sting cavity area, ft.^{2}	0.1963	
A_{B1}	Base area, Tap 1, ft.^{2}	0.0587	
A_{B2}	Base area, Tap 2, ft.^{2}	0.0824	

DATA REDUCTION (Concluded)

SYMBOL		MODEL SCALE	FULL SCALE
A_{B3}	Base area, Tap 3, ft.^{2}	0.0467	
A_{B4}	Base area, Tap 4, ft.^{2}	0.0553	
A_{B5}	Base area, Tap 5, ft.^{2}	0.0772	
A_{B6}	Base area, Tap 6, ft.^{2}	0.1146	
A_{B7}	Base area, Tap 7, ft.^{2}	0.1798	
A_{B8}	Base area, Tap 8, ft.^{2}	0.0860	
A_{B9}	Base area, Tap 9, ft.^{2}	0.1950	

REFERENCES

1. SD76-SH-0189 "Pretest Information for Tests OA145A, B, C of a .05-Scale Model (39-0) of the SSV Orbiter 102 in the NASA/ARC Unitary Plan Wind Tunnel," dated September 30, 1976.

2. Report NA76-662, "Structural Analysis for the 0.05-Scale SSV Orbiter Verification Model 39-0."

3. Rockwell Internal Letter SAS/AERO/77-038, "Model Readiness Review Model 39-0," dated December 20, 1976.

4. SPRT9F-1, "Elevon and Flipper Door Hinge Moments from Pressure Data of Test OA145A, B, C, and OA101", November 1978.

TABLE I.

TEST : OA145A, B, C

DATE :

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBER (per unit length) x 10^6	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.6	5.0, 3.0, 9.0		
0.8	↓		
0.9			
0.95			
1.05			
1.10			
1.20			
1.30			
1.40			
1.55	4.0		
2.0	1.5, 3.5, 4.5		
2.5	2.5, 3.25, 3.5, 4.0		
3.0	1.0, 2.5		
3.5	2.5		

BALANCE UTILIZED: 4 INCH TASK MKIVA

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF	6000/6000 LBS	0.5%	*
SF	3000/3000 LBS	"	
AF	2500 LBS	0.2%	
PM			
RM	16000 IN-LB	0.5%	
YM			

COMMENTS: Accuracy applies to maximum gage capacity.
*Coefficient tolerance based on root sum square of forward and aft gages, tolerance quoted for range of Mach number tested.
See Table VIII.

TABLE II. DATA SET/RUN COLLATION SUMMARY

TEST: OA145C (ARC-87-118) DATA SET/RUN NUMBER COLLATION SUMMARY DATE:

DATA SET IDENTIFIER	CONFIGURATION	α	β	δe	δa	δDF	δSB	δR	RE/FT	MACH NUMBERS 2.5	3.0	3.5	TEST RUN NUMBERS
R2H001	ϕ_1 (δ_{SB} = 55°)	FC	0	0	0	0	55	0	1.0		10*		
02	LONG. & LAT. DIR.								2.5	16	22	85**	
03	STABILITY								3.25	13			
04		↓	↓						4.0	17			
05		5	FC						2.5	19*	27	87*	
06		10							2.5	29*	24	88*	
07		15							2.5	15*	23	15*	
08		15							3.25	14*			
09		15							4.0	18*			
10		20	↓						2.5	31*	25	152*	
11	↓	FC	2	↓	↓	↓	↓	↓	2.5	28°	26	86°	

1 7 13 19 25 31 37 43 49 55 61 67 75 76

FOR COEFFICIENT SCHEDULES SEE PAGE 57

α OR β SCHEDULES

COEFFICIENTS
α(FC) = 0, 2, 4, 6, 8, 10, 12, 14, 15, 17, 18, 20, 22, 26, 30
β(FC) = -6.5, -4, -2, -1, 0, 1, 2, 3, 4, 6.5, 10

IDVAR (1) IDVAR (2) NDV

* α = 20, 26 missing
** α = 30 missing
00 α = 4, 6, 30 missing
* β = 10 missing
0 α = 30 missing

• DENOTES PRESSURE DATA TAKEN

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TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)

TEST: OA145C (ARC-87-118) DATA SET/RUN NUMBER COLLATION SUMMARY DATE:

DATA SET IDENTIFIER	CONFIGURATION	α	β	δe	δa	δBF	δSB	δR	RE/FT	MACH NUMBERS 2.5	3.0	3.5
R2H012	ELEVON EFF.	A	0	5	0	0	55	0	2.5		41	
13		B		10							40*	186*
14		B		20							39	
15		A		-5							45	
16		B		-10							46*	185*
17		B		-20							47	
18		B		-35							48	
19		10		FC							38	
20		15		FC						32	33	84
21		20		FC							37	

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES

COEFFICIENTS IDVAR (1) IDVAR (2) NDV

α(A) = 0, 2, 4, 6, 8, 10, 12, 14, 15, 16, 18, 20, 22, 26, 30 δe(FC) = -15, -13, -10, -8, -5, -4, -2,

α(B) = 0, 2.5, 5, 10, 12, 14, 15, 16, 18, 20, 22, 25 0, 2, 4, 5, 8, 10

* α = 0, 2.5, 25 missing

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TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)

TEST: OA145C (ARC-87-118) DATA SET/RUN NUMBER COLLATION SUMMARY DATE:

DATA SET IDENTIFIER	CONFIGURATION	α	β	δe	δa	δDF	δSB	δR	RE/ET	MACH NUMBERS 2.5	3.0	3.5	TEST RUN NUMBERS
R2H022	Φ1 (δSB = 55°)	10	A	10	0	0	55	0	2.5		93		
23	ELEVON IN β	15									92		
24		20									89		
25		10		-10							94		
26		15									91		
27		20									90		
28		10	2	A							78		
29		15	2								79		
30		20	2								80		

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES

COEFFICIENTS

β(A) = -6, -4, -2, -1, 0, 1, 2, 3, 4, 6

δe(A) = -15, -13, -10, -8, -7, -6, -5, -4, -2, 0, 2, 4, 5, 8, 10

IDVAR (1) IDVAR (2) NDV

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TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)

TEST: OA145C (ARC-87-118) DATA SET/RUN NUMBER COLLATION SUMMARY DATE:

DATA SET IDENTIFIER	CONFIGURATION	α	β	δe	δa	δBF	δSB	δR	RE/FT	MACH NUMBERS 2.5	3.0	3.5	TEST RUN NUMBERS
R2H031	AILERON EFFECT	10	0	0	FC	0	55	0	2.5		64		
32		15									34*	176	
33		20									71		
34		FC			5						67		
35		10		A							77		
36		15									76		
37		20									75		
38	EFFECTS OF δe AND δa	10		-10	FC						65		
39		15									61		
40		20									70		
41		FC			5						66		
42		10		10	FC						63		
43		15									62		
44		20									72		
45		FC			5						68		
46		15	A	0	5						69		
47		C	0	0	-5							179	

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES

COEFFICIENTS

δa(FC) = -5, -3, -2, -1, 0, 1, 2, 3, 5, 8, 10

IDVAR (1) IDVAR (2) NDV

α(C) = 5, 7, 10, 12, 14, 15, 16, 18, 20, 22

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TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)

TEST: OA145C (ARC-87-118) DATA SET/RUN NUMBER COLLATION SUMMARY DATE:

DATA SET IDENTIFIER	CONFIGURATION	α	β	δe	δa	δBF	δSB	δR	RE/FT	MACH NUMBERS 2.5	3.0	3.5
R2H048	ϕ_1 (δ_{SB} = 55°)	10	0	0	0	0	55	B	2.5		49	
49	RUDDER EFFECT	15	↓	↓	↓	↓	↓	A	↓		36°	178 △
50		20						B			50	
51		B						-5			52°	184 *
52		10	A					-5			53	
53		15	A					-5			54	
54		20	A					-5			55	
55	↓	15	2	↓	↓	↓	↓	A	↓		51	
R2H056	BODY FLAP	B	0	0	0	-11.7	55	0	2.5		60°	187 *
57		↓				16.3					59°	188 *
58		↓				22.5					58	
59		10				FC					56	
60		15				FC					35°	177
61	↓	20	↓	↓	↓	FC	↓	↓	↓		57	
R2H062	TRIP LIMIT	A	0	-35	0	-11.7	55	0	2.5		73	
63	↓	A	0	20	0	22.5	55	0	2.5		74	

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES

COEFFICIENTS

$\delta_R(B)$ = -9.5, -5, -2.5, 0, 2.5, 5, 10

$\delta_R(A)$ = -22.8, -18, -15, -10, -5, -2.5, 0, 2.5, 5, 10, 15, 22.8

$\delta_{BF}(FC)$ = -11.7, -8, -6, -4, -2, 0, 2, 4, 6, 8, 12, 16.3, 22.5 (IDVAR (1), IDVAR (2), NDV)

△ δ_R = 22.8 missing * α = 0, 2.5, 25 missing

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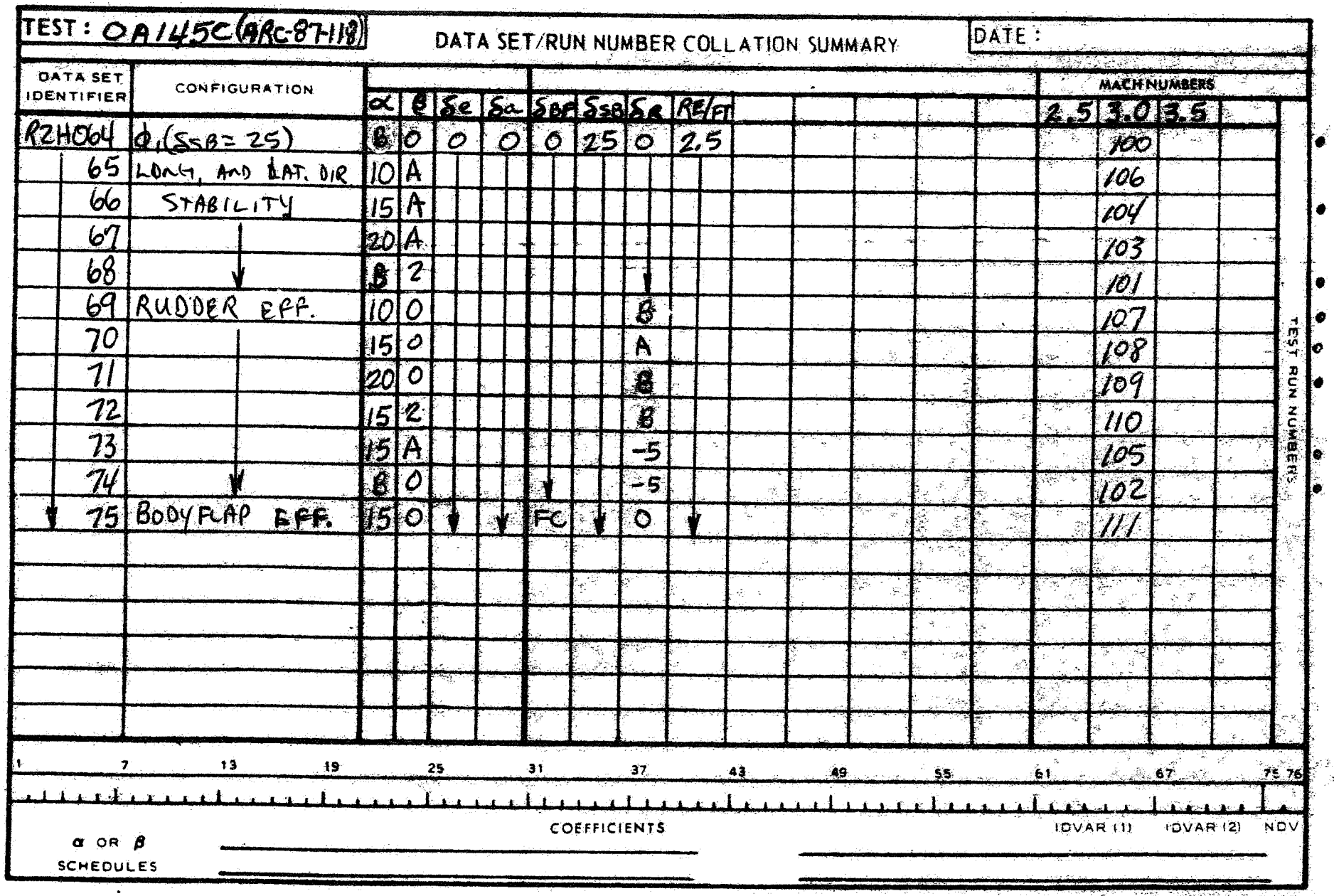
TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)



TEST : OA145C (ARC-87-118) DATA SET/RUN NUMBER COLLATION SUMMARY DATE :

DATA SET IDENTIFIER	CONFIGURATION	α	β	δe	δa	δBF	δSB	δR	RE/FI	MACH NUMBERS 2.5	3.0	3.5	TEST RUN NUMBERS
R2H064	ϕ_1 (δ_{SB} = 25)	8	0	0	0	0	25	0	2.5		100		
65	LONG. AND LAT. DIR	10	A								106		
66	STABILITY	15	A								104		
67	↓	20	A								103		
68	↓	8	2					↓			101		
69	RUDDER EFF.	10	0					8			107		
70	↓	15	0					A			108		
71	↓	20	0					8			109		
72	↓	15	2					8			110		
73	↓	15	A					-5			105		
74	↓	8	0					-5			102		
75	BODY FLAP EFF.	15	0	↓	↓	FC	↓	0	↓		111		

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

NASA-MSFC-MAF

TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)

TEST : OA145C (ARC-87-118) DATA SET/RUN NUMBER COLLATION SUMMARY DATE :

DATA SET IDENTIFIER	CONFIGURATION	α	β	δ_e	δ_a	δ_{BF}	δ_{SB}	δ_R	RE/FT	MACH NUMBERS 2.5	3.0	3.5	TEST RUN NUMBERS
R2A076	$\Phi_1(\delta_{SB}=40)$	B	0	0	0	0	40	0	2.5		139		
77	LONG & LAT. DIR.	15	A					0			141		
78	STABILITY	B	2					0			140		
79		10	0					B			144		
80		15	0					A			143		
81		20	0					B			145		
82		15	2					A			146		
83		15	A					-5			142		
84	↓	B	0	↓	↓	↓	↓	-5	↓		147		
85	$\Phi_1(\delta_{SB}=70)$	B	0	0	0	0	70	0	2.5		129		
86	LONG & LAT. DIR.	15	A					0			132		
87	STABILITY	B	0					0			131		
88		10	0					B			135		
89		15	0					C			134		
90		20	0					B			136		
91		15	2					C			137		
92		15	A					-5			133		
↓ 93	↓	B	0	↓	↓	↓	↓	-5	↓		130		

1 7 13 19 25 31 37 43 49 55 61 67 75 76

IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

COEFFICIENTS $\delta_R(c) = -18, -15, -10, -5, -2.5, 0, 2.5, 5, 10, 15$

NASA-MSFC-MAF

TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)

TEST : OA145C (ARC-87-118) DATA SET/RUN NUMBER COLLATION SUMMARY DATE :

DATA SET IDENTIFIER	CONFIGURATION	α	β	δ_e	δ_a	δ_{BF}	δ_{SB}	δ_R	RE/FT	MACH NUMBERS 2.5	3.0	3.5	TEST RUN NUMBERS
R2H094	ϕ. (δ_{SB} = 87.2)	8	0	0	0	0	87.2	0	2.5		114		
95	LONG & LAT. DIR.	10	A								120		
96	STABILITY	15	A								118		
97		20	A								117		
98		8	2								115		
99		10	0					A			121		
A0		15	0					C			122		
A1		20	0					A			123		
A2		15	2					A			124		
A3		15	A					-5			119		
A4		8	0					-5			116		
A5		15	0			FC		0			125		

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

NASA-MSFC-MAF

TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)

TEST : OA145C (ARC-87-118) | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE :

DATA SET IDENTIFIER	CONFIGURATION	α	β	δe	δa	δBF	δSB	δR	RE/FT	MACH NUMBERS 2.5	3.0	3.5
R2HOA6	CONTROL INTERACTION	15	0	0	0	-11.7	55	D	2.5		159	
A7	δR / δBF		0			16.3		D			158	
A8	↓		A			-11.7		-5			160	
A9	↓		A			16.3		-5			162	
B0	δe / δBF		0	FC		-11.7		0			154	
B1	↓			FC		16.3		0			153	
B2	↓			10		FC		0			156	
B3	↓			-10		FC		0			157	
B4	↓	B		-10		-11.7		↓			180	
B5	↓			-10		16.3		↓			181	
B6	↓			10		-11.7		↓			183	
B7	↓	↓	↓	10	↓	16.3	↓	↓	↓		182	

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

COEFFICIENTS

δR(D) = -22.8, -18, -15, -10, -5, -2.5, 0, 2.5, 5, 10

NASA-MSFC-MAF

TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)

TEST: OA145C (ARC-87-118) DATA SET/RUN NUMBER COLLATION SUMMARY DATE:

DATA SET IDENTIFIER	CONFIGURATION	α	β	δe	δa	δBF	δSB	δR	RE/FT	ΦB	IB	MACH NUMBERS 2.5	3.0	3.5	TEST RUN NUMBERS
R2HOB8	INBD/OUTBD ELEVON	15	0	–	0	0	55	0	25	0	A		163		
B9	DIFFERENTIAL DEFL.			–						5	B		164		
C0				–						-5	C		165		
C1				–						A	0		166		
C2				–						B	5		167		
C3				–	↓					C	-5		168		
C4				0	Y					0	X		169		
C5				5						5	X		170		
C6				-5						-5	X		171		
C7				0						X	0		172		
C8				5						X	5		173		
C9		↓	↓	-5	↓	↓	↓	↓	↓	X	-5		174		

1 7 13 19 25 31 37 43 49 55 61 67 75 76

IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES $\delta e_{IB} = \delta e\ IB(A) = -4, -2, 0, 2, 4$ COEFFICIENTS

$\delta e_{IB} = \delta e\ IB(B) = 1, 3, 5, 7, 9$

$\delta e_{IB} = \delta e\ IB(C) = -9, -7, -5, -3, -1$

$\delta a_{IB}(X) = -4, -2, 0, 2, 4$

$\delta a_{\Phi B}(X) = -4, -2, 0, 2, 4$

$\delta a(Y) = -2, -1, 0, 1, 2$

NASA-MSFC-MAF

TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)

TEST: OA145C (ARC-87-118) | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE:

DATA SET IDENTIFIER	CONFIGURATION	α	β	δe	δa	δDF	δSB	δR	RE/FT	MACH NUMBERS 2.5	3.0	3.5	TEST RUN NUMBERS
R2HODO		15	A	0	0	-11.7	55	-5	2.5		161	A	
D1		FC	0	0	0	0	55	0	2.5		150		
D2		15	A	0	0	0	55	0	2.5		149		
D3		15	0	B	0	0	55	0	2.5			175	

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES

COEFFICIENTS (IDVAR (1)) (IDVAR (2)) NDV

δe(B) = -30, -20, -15, -13, -10, -8, -5, -2, 0, 2, 4, 5, 8, 10, 20

Δβ = 6 missing

NASA-MSFC-MAF

TABLE II. DATA SET/RUN COLLATION SUMMARY (Continued)

COEFFICIENT SCHEDULES:

First character identified for Force Data

R	CN	CA	CL	CD	CLM	CY	CYN	CBL	ELEVØN	AILRØN
A	CHEØ	CHEI	CHFDØ	CHFDI	CHBF	CHSB	AILRØN	ELEVØN		
B	CONF	RN	Q	CAB	CAC	CAF	L/D	XCP/L	P	
C	BETA/ALPHA		ELEVØN	AILRØN	BDFLAP	SPDBRK	RUDDER	ELV-IB	ELV-ØB	AIL-IB	AIL-ØB
D	ELV-LØ	ELV-LI	ELV-RØ	ELV-RI	DELL	DELR	DRHL			
E	CP225	CP228	CP231	CP234	CP237	CP240	CP243	CP246	CP12	CP13

PRESSURE DATA COMPONENTS:

Fourth Character Identifier for Pressure Dataset

C Inboard Elevon Lower Surface

D Outboard Elevon Lower Surface

I Inboard Flipper Door Upper Surface

J Outboard Flipper Door Upper Surface

Q Inboard Elevon Upper Surface

R Outboard Elevon Upper Surface

S Body Flap Upper Surface

TABLE II. DATA SET/RUN COLLATION SUMMARY (Concluded)

T	Body Flap Lower Surface
W	Rudder Outer Surface
X	Rudder Inner Surface
6	Orbiter Base
8	Sting Lower Surface
9	Sting Upper Surface

Note: Eleven cove (flipper door lower surface) pressure coefficient data is presented in force format (schedule E above).

TABLE III. WING AND ELEVON PRESSURE TAP LOCATIONS

Spanwise Location - η	Upper Surface XW/c_W					Upper Surface XE/C_{EL}						
	0.150	0.250	0.400	0.550	X_o1359.6	-0.100	0.100	0.200	0.400	0.600	0.800	1.000
Inboard Edge									101		102	
0.340					15			103	104	105	106	107
0.427					25			108	109	110	111	112
0.534	31	32	33	34	35			113	114	115	116	117
0.615					45			118	119	120	121	122
Inboard Gap Edge									123		124	
Outboard Gap Edge									125		126	
0.715					55			127	128	129	130	131
0.800	61	62	63	64	65			132	133	134	135	136
0.887					75			137	138	139	140	141
0.960					85			142	143	144	145	146
Outboard Edge									147		148	149
	Lower Surface XW/CW					Lower Surface XE/C_{EL}						
Inboard Edge									150		151	
0.340						20	152	153	154	155	156	
0.427						30	157	158	159	160	161	
0.534	36	37	38	39		40	162	163	164	165	166	
0.615						50	167	168	169	170	171	
Inboard Gap Edge									172		173	
Outboard Gap Edge									174		175	
0.715						60	176	177	178	179	180	
0.800	66	67	68	69		70	181	182	183	184	185	
0.887						80	186	187	188	189	190	
0.960						90	191	192	193	194	195	
Outboard Edge									196		197	

TABLE IV. FLIPPER DOOR PRESSURE TAP LOCATIONS

SPANWISE LOCATION WING η	UPPER SURFACE X_{FD}/C_{FD}		
	0.10	0.50	0.90
0.340	201	202	203
0.427	204	205	206
0.534	207	208	209
0.615	210	211	212
0.715	213	214	215
0.800	216	217	218
0.887	219	220	221
0.960	222	223	224
INTERNAL CAVITY X_{FD}/C_{FD}			
	0.10	0.50	0.90
0.340		225	
0.427		228	
0.534		231	
0.615		234	
0.715		237	
0.800		240	
0.887		243	
0.960		246	

TABLE V. BODY FLAP PRESSURE TAP LOCATIONS

SPANWISE LOCATION η = y/b at Hingeline	UPPER SURFACE X_{BF}/C_{BF}			
	-0.20	0.20	0.60	1.00
0.10 (L.H. Side)		301	302	303
0.20			304	
0.35				
0.50 (Y_o = 0)		305	306	307
0.80 (R.H. Side)			308	
	LOWER SURFACE X_{BF}/C_{BF}			
0.10 (L.H. Side)	309	314	315	316
0.20	310	317	318	319
0.35	311	320	321	322
0.50 (Y_o = 0)	312	323	324	325
0.80 (R.H. Side)	313	326	327	328

TABLE VI. SPEED BRAKE PRESSURE TAP LOCATIONS

SPANWISE LOCATION η = y/b at HINGELINE	OUTER SURFACE (L.H.) X_R/C_R				
	-0.20	0.20	0.60	0.80	1.00
0.10 (BOTTOM)	401	410	411		
0.20	402	412	413		414
0.30	403	415	416		417
0.40	404	418	419		420
0.50	405	421	422		423
0.60	406	424	425		426
0.70	407	427	428		429
0.80	408	430	431		432
0.90	409	433	434		435
1.03 (TOP)				436	
	INSIDE SURFACE (L.H.) X_R/C_R				
0.10 (BOTTOM)		437	438		
0.20		439	440		441
0.30					
0.40		442	443		444
0.50		445	446		447
0.60					
0.70		448	449		450
0.80					
0.90		451	452		453
1.03 (TOP)				454	

TABLE VII. AIR DATA PROBE AND STING PRESSURE TAP LOCATIONS

AIR DATA PROBE PRESSURES

L.H. SIDE AT X_o 291.67, Z_o 320.46	12
R.H. SIDE AT X_o 291.67, Z_o 320.46	13

STING PRESSURES

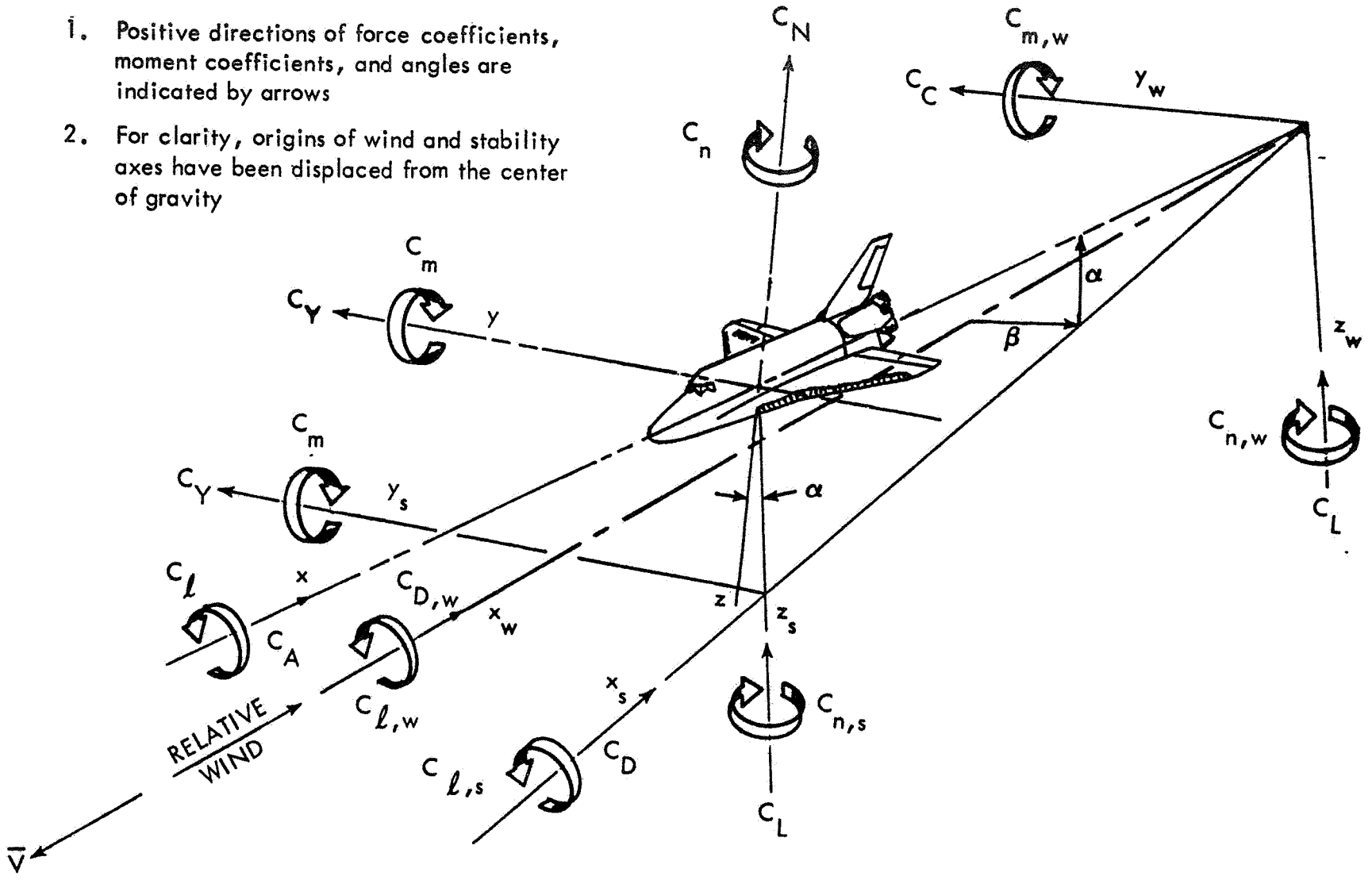
DISTANCE FROM MODEL BASE STATION - INCHES	UPPER STING	LOWER STING
0	501	511
2	502	512
4	503	513
6	504	514
8	505	515
10	506	516
12	507	517
14	508	518
16	509	519
18	510	520

TABLE VIII. COEFFICIENT TOLERANCES FOR THE 4-INCH TASK MKIVA BALANCE

COEFFICIENT	MACH NUMBER		
	.6	1.2	3.5
C_N	±0.009600	±0.006100	±0.017100
C_m	±0.002800	±0.001700	±0.005000
C_Y	±0.004800	±0.003000	±0.008500
C_n	±0.000580	±0.003700	±0.001050
C_A	±0.001100	±0.000700	±0.002000
C_ℓ	±0.000385	±0.000240	±0.000690

Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity



a. Axes Systems Definition

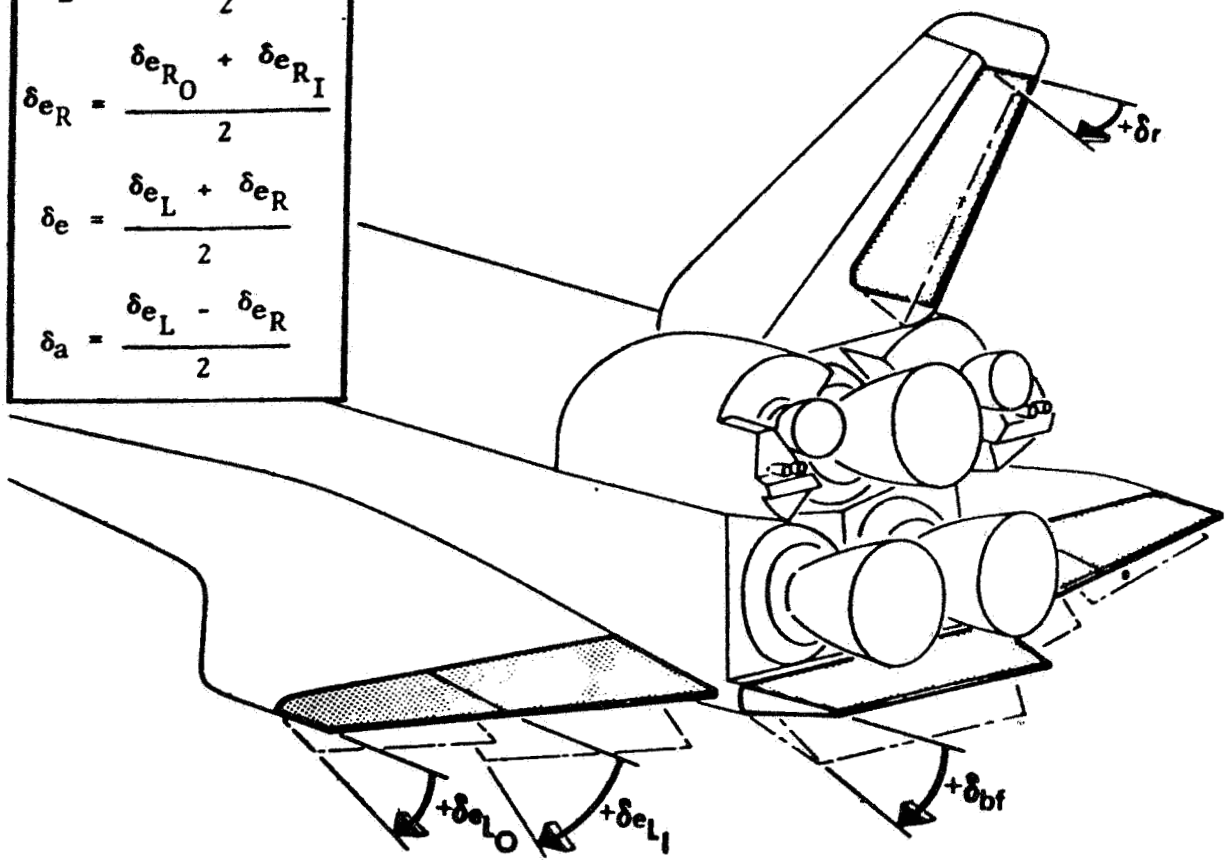
Figure 1. Axes systems and sign convention.

$$\delta_{e_L} = \frac{\delta_{e_{L_O}} + \delta_{e_{L_I}}}{2}$$

$$\delta_{e_R} = \frac{\delta_{e_{R_O}} + \delta_{e_{R_I}}}{2}$$

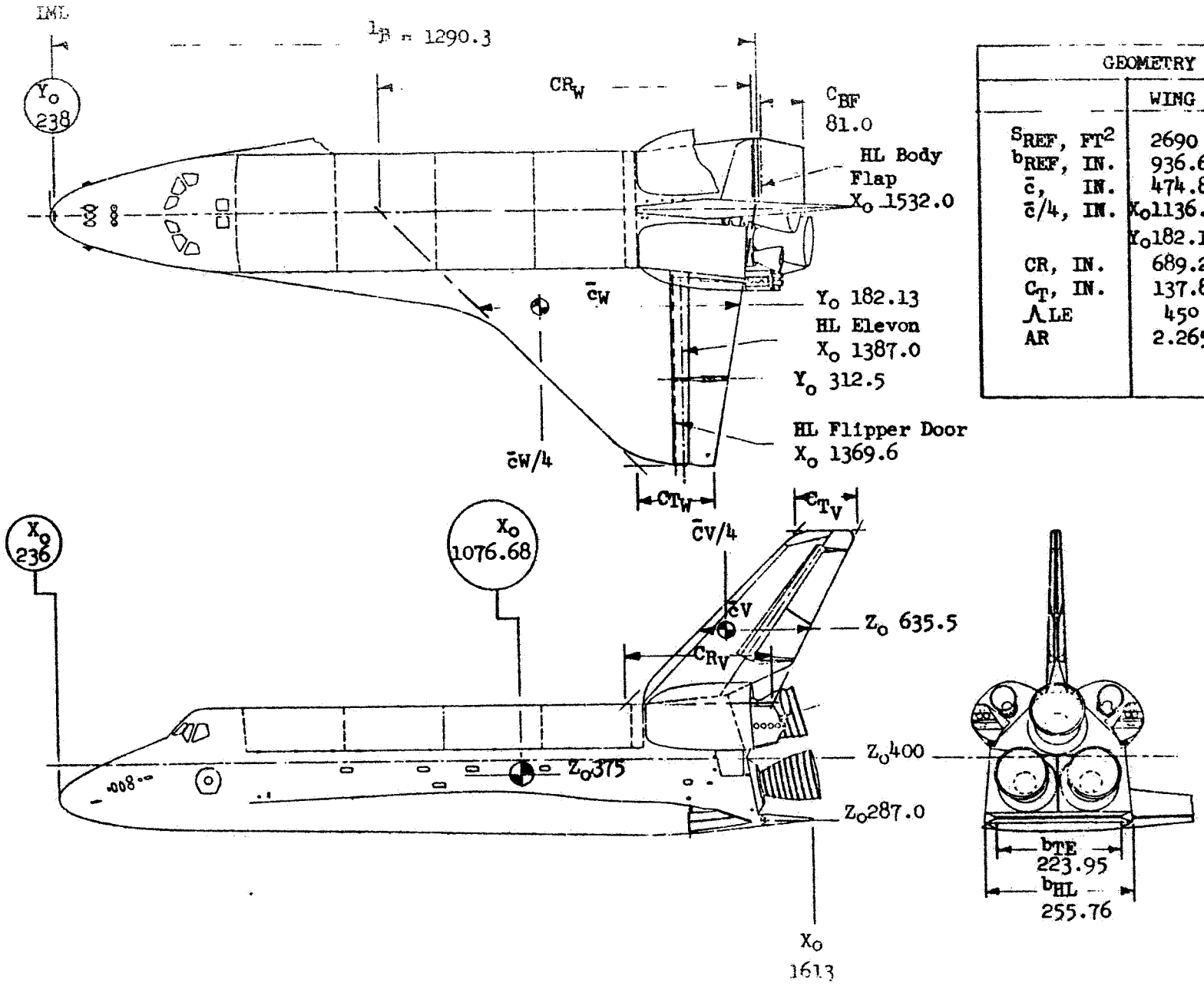
$$\delta_e = \frac{\delta_{e_L} + \delta_{e_R}}{2}$$

$$\delta_a = \frac{\delta_{e_L} - \delta_{e_R}}{2}$$



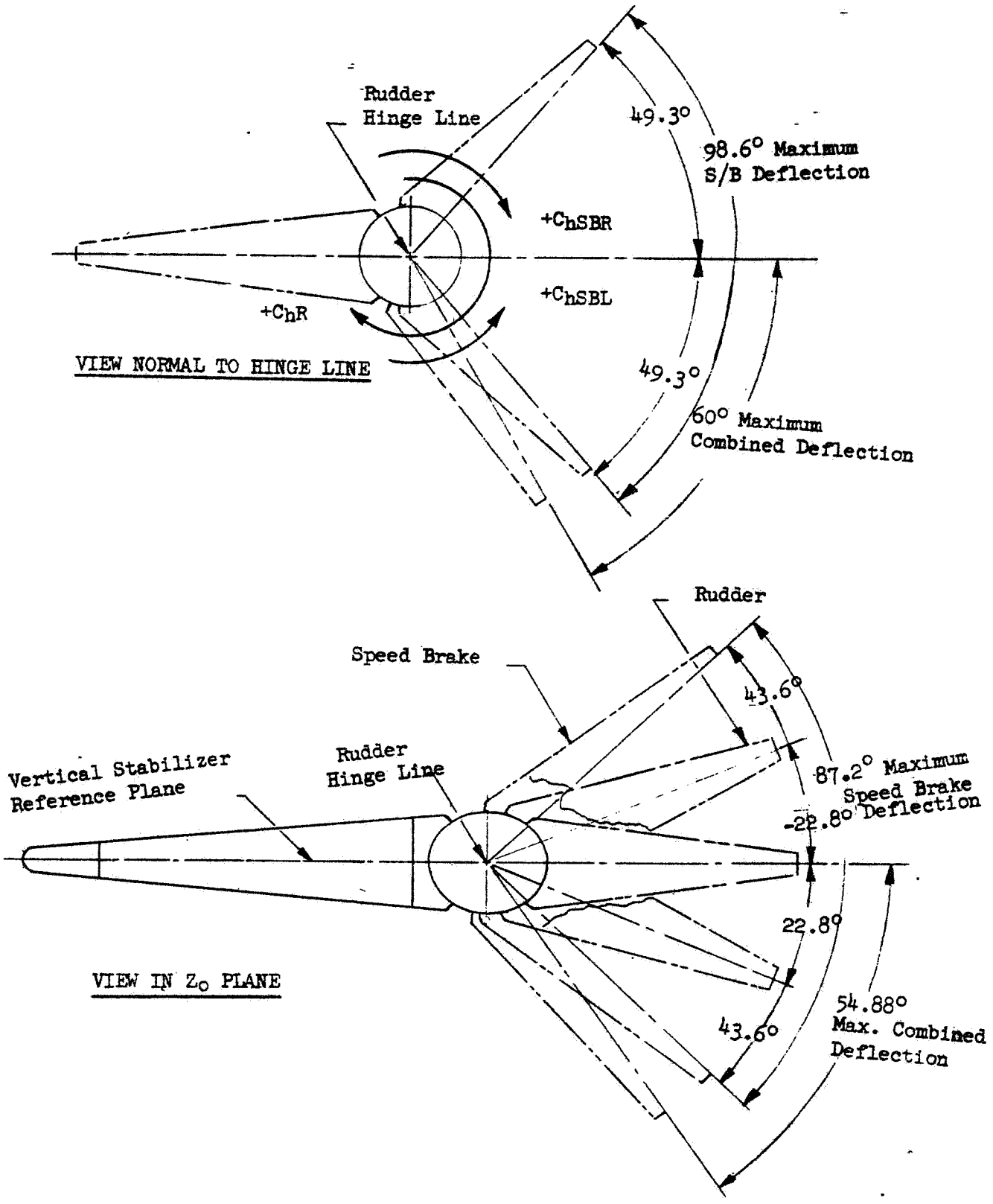
Positive Deflection of	Angle	Aero Forces and Moments	Hinge Moment
Rudder, δr	$+\beta$, $-\psi$	$+C_Y$, $-C_n$	$-C_{h_r}$
Elevon, δ_e	$-\alpha$, $-\theta$	$-C_m$	$-C_{h_e}$
Right, δ_{e_R}	$-\phi$	$-C_\ell$	$-C_{he_R}$
Left, δ_{e_L}	$+\phi$	$+C_\ell$	$-C_{he_L}$
Aileron, δ_a	$+\phi$	$+C_\ell$	
Body Flap, δ_{bf}	$-\alpha$, $-\theta$	$-C_m$	$-C_{h_{bf}}$

b. Control Surface Deflections
Figure 1. Continued.

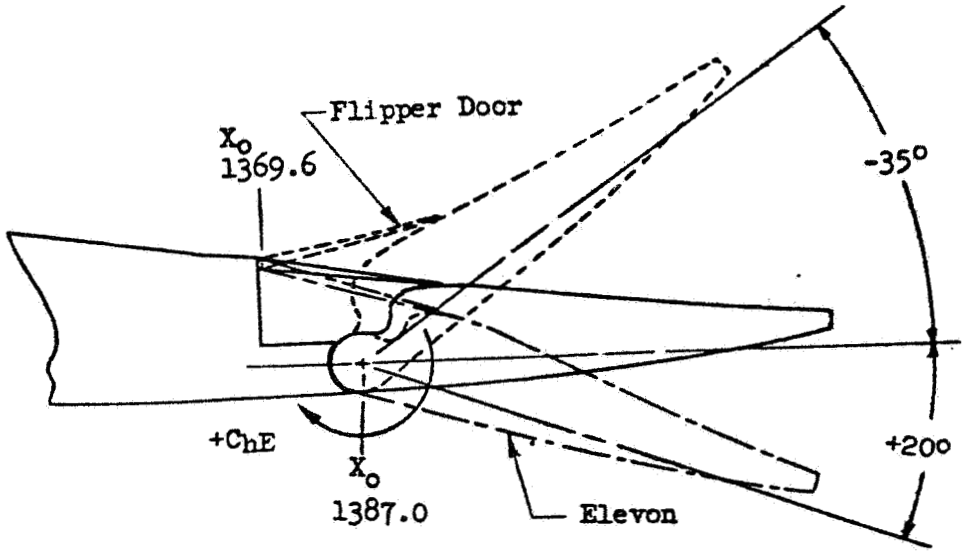


GEOMETRY		
	WING	VERTICAL
S_{REF}, FT^2	2690	413.25
b_{REF}, IN.	936.68	315.72
$\bar{c}$, IN.	474.81	199.81
$\bar{c}/4$, IN.	X_o1136.83	X_o1463.65
	Y_o182.13	Z_o635.5
CR, IN.	689.24	
C_T, IN.	137.85	
Λ_{LE}	45°	45°
AR	2.265	1.675

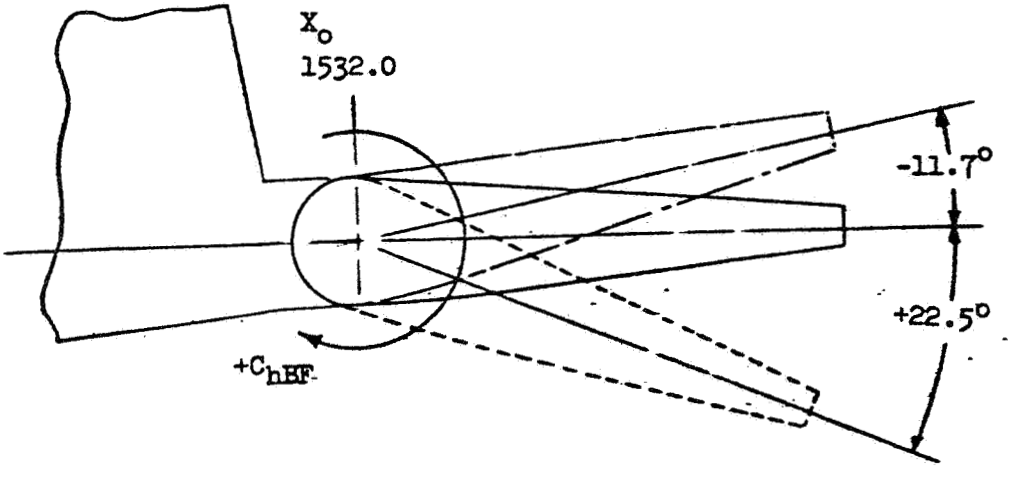
c. Orbiter Reference Dimensions
Figure 1. Continued.



d. Rudder/Speed Brake Deflections
Figure 1. Continued.

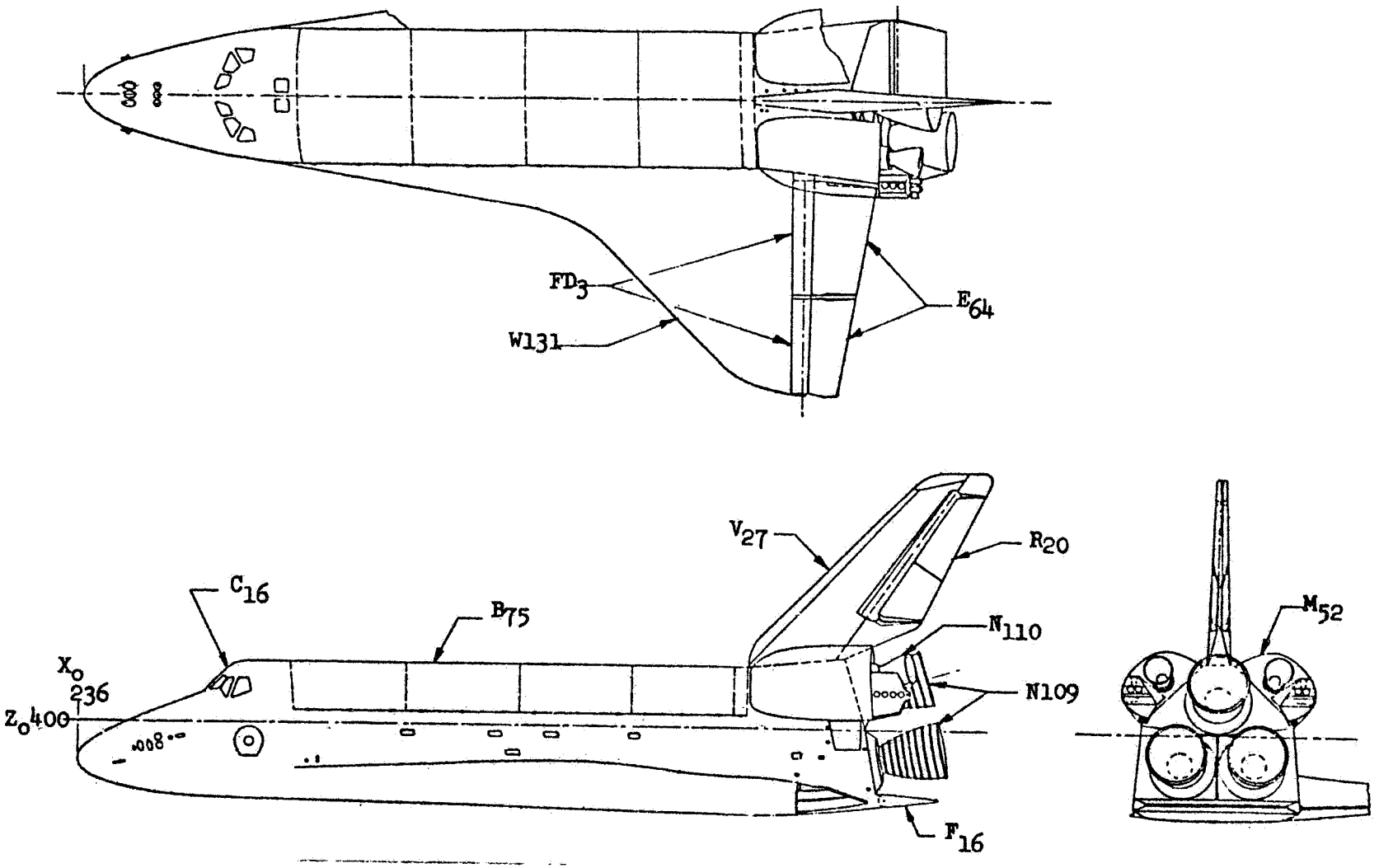


ELEVON DEFLECTIONS



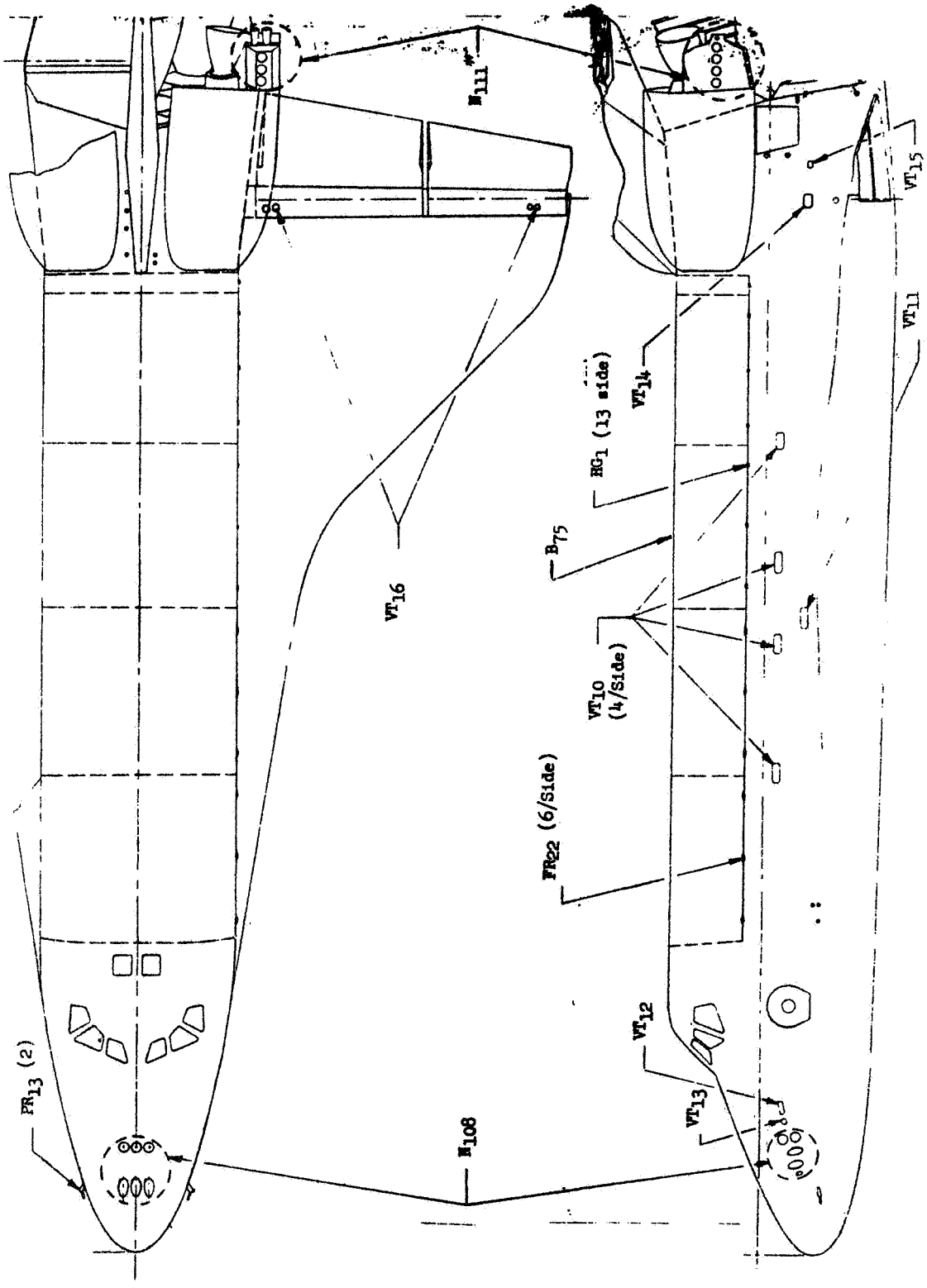
BODY FLAP DEFLECTIONS

e. Elevon and Body Flap Deflections
Figure 1. Concluded.

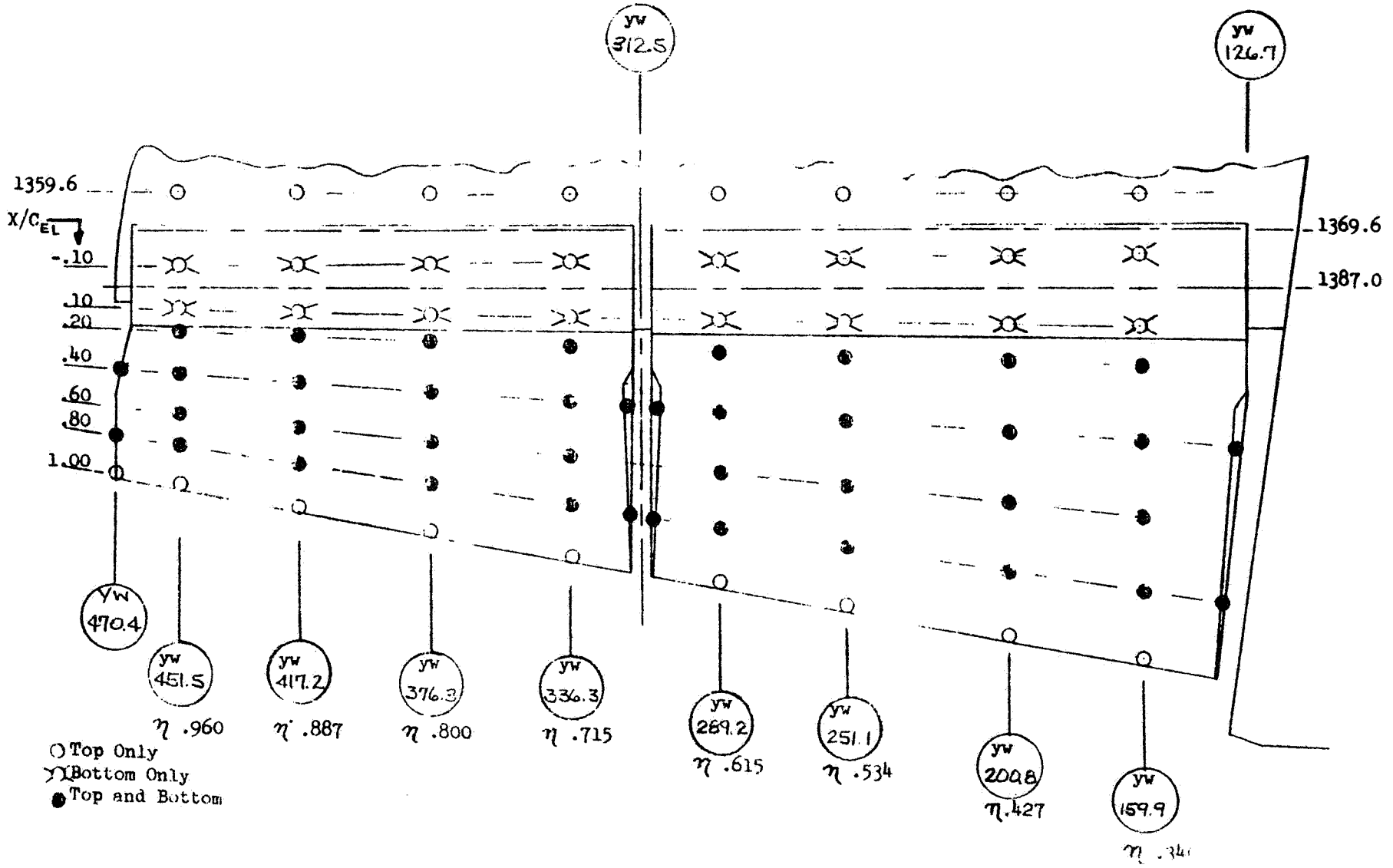


a. Orbiter Configuration

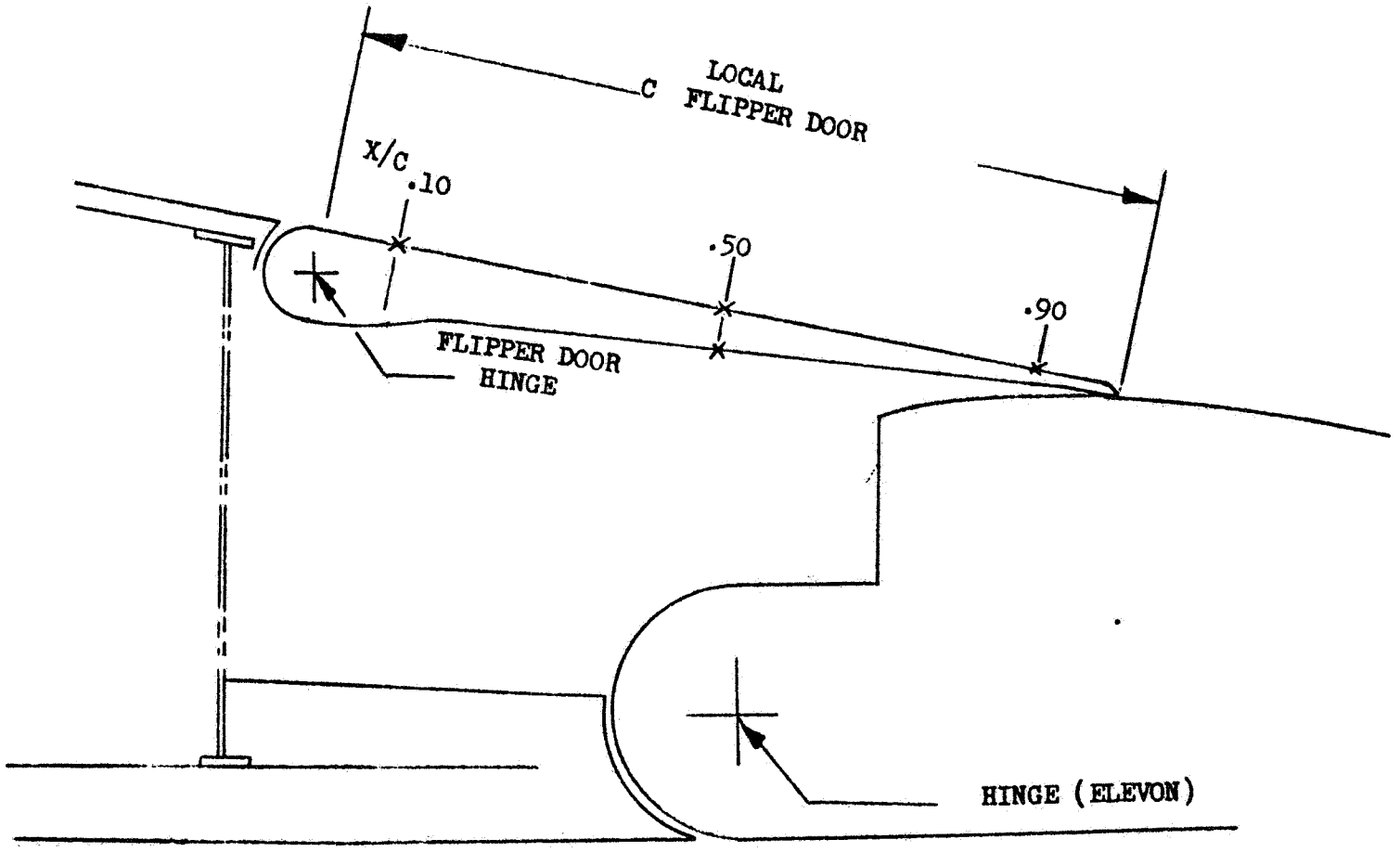
Figure 2. Model sketches.



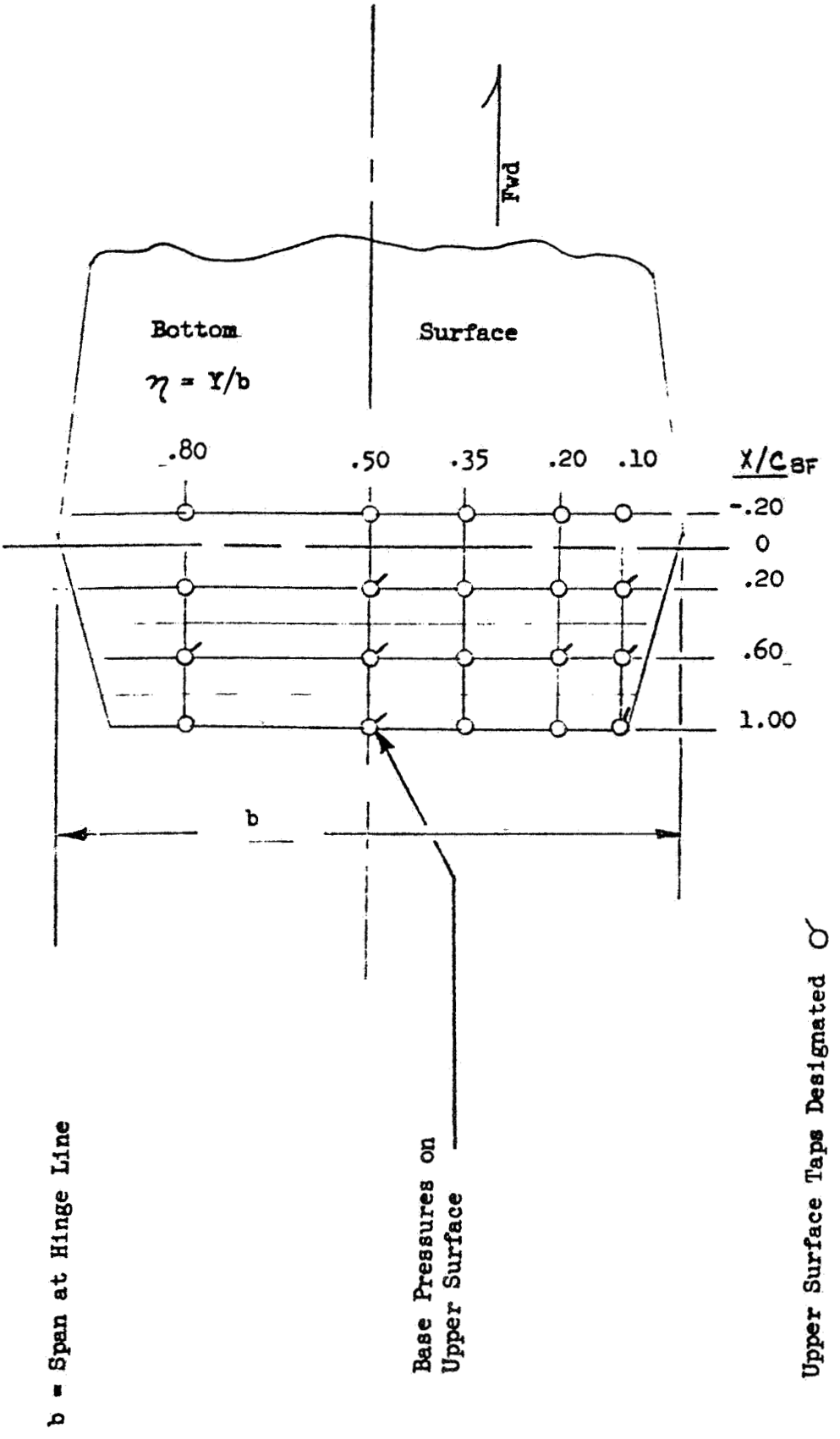
b. Protuberances and Penetrations
Figure 2. Continued.



c. Elevon and Wing Pressure Tap Locations
Figure 2. Continued.

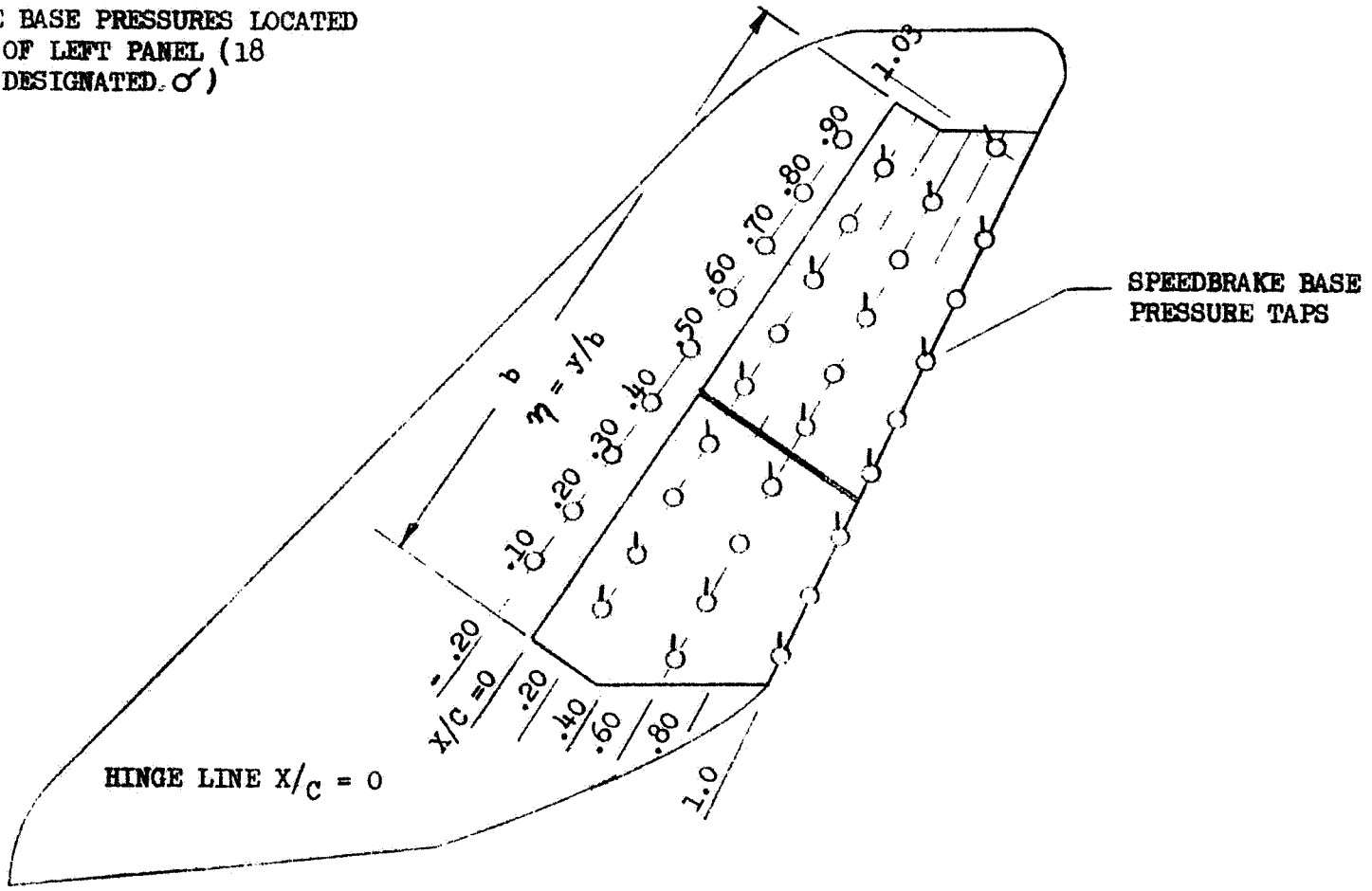


d. Flipper Door and Elevon Cavity Pressure Tap Locations
Figure 2. Continued.

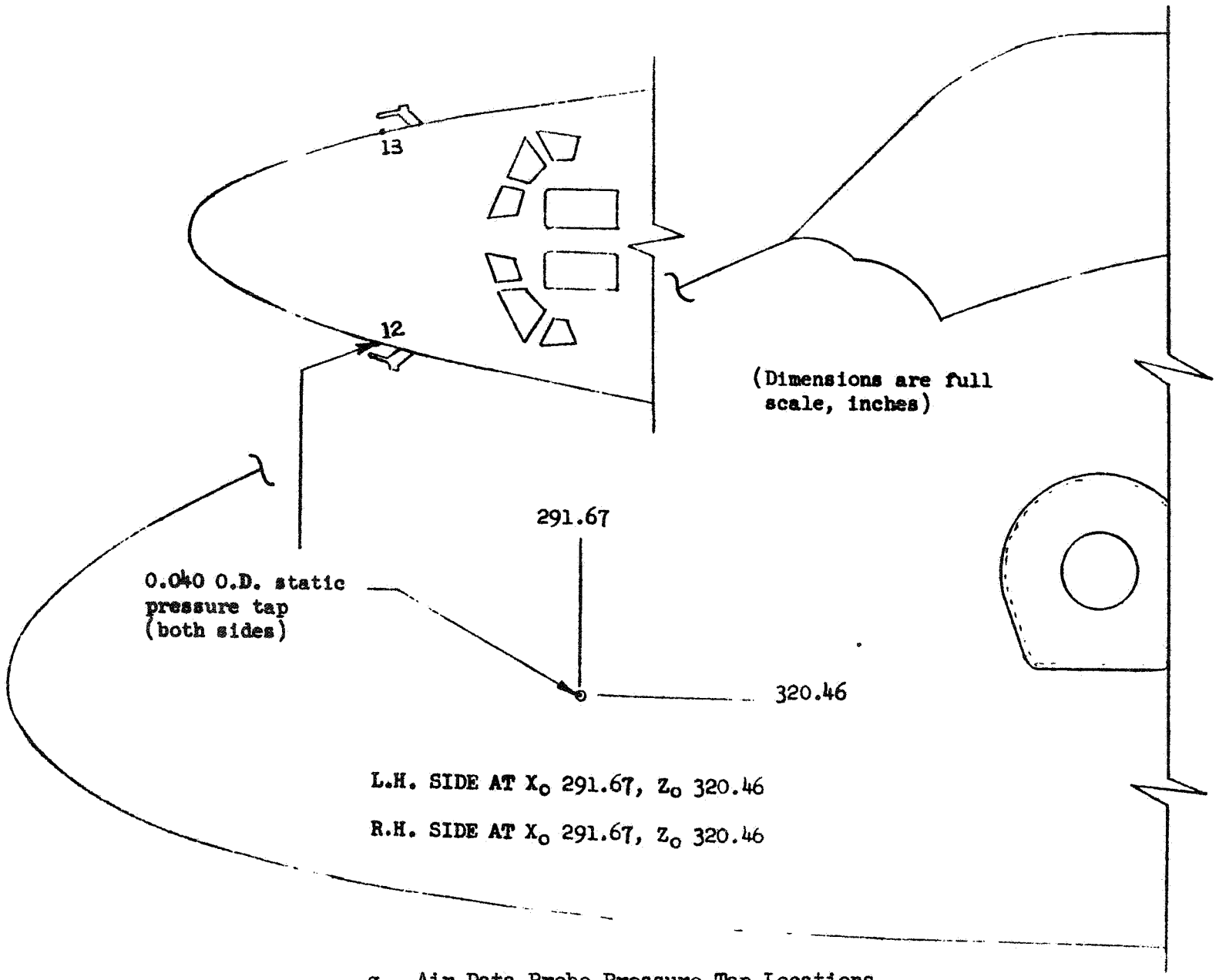


e. Body Flap Pressure Tap Locations
Figure 2. Continued.

- ALL MEASUREMENTS LEFT SIDE ONLY.
- TAPS AT T.E. LOCATED AS CLOSE TO T.E. AS POSSIBLE.
- SPEEDBRAKE BASE PRESSURES LOCATED ON INSIDE OF LEFT PANEL (18 LOCATIONS DESIGNATED σ)



f. Rudder/Speed Brake Surface Pressure Tap Locations
Figure 2. Continued.

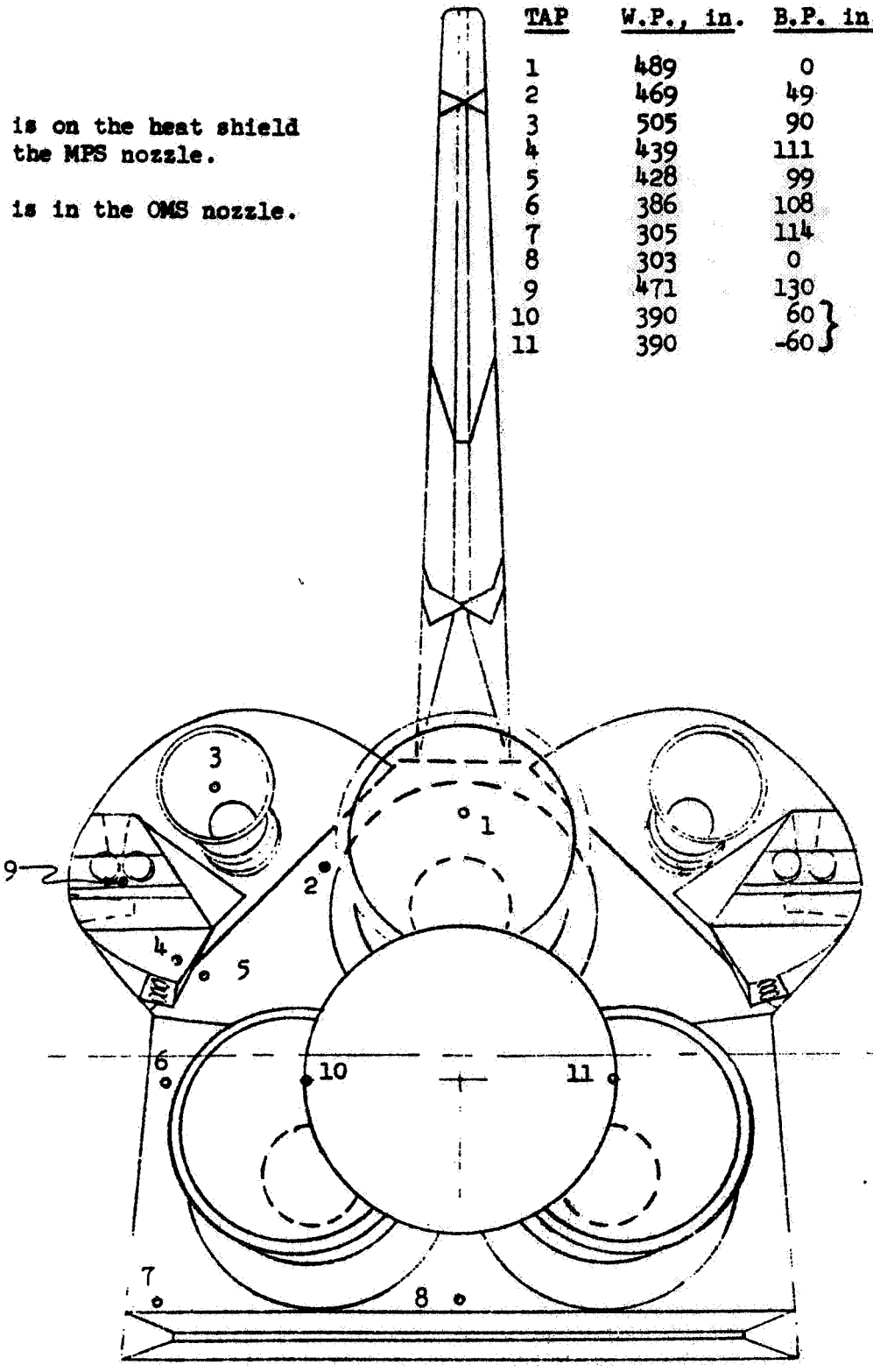


g. Air Data Probe Pressure Tap Locations
Figure 2. Continued.

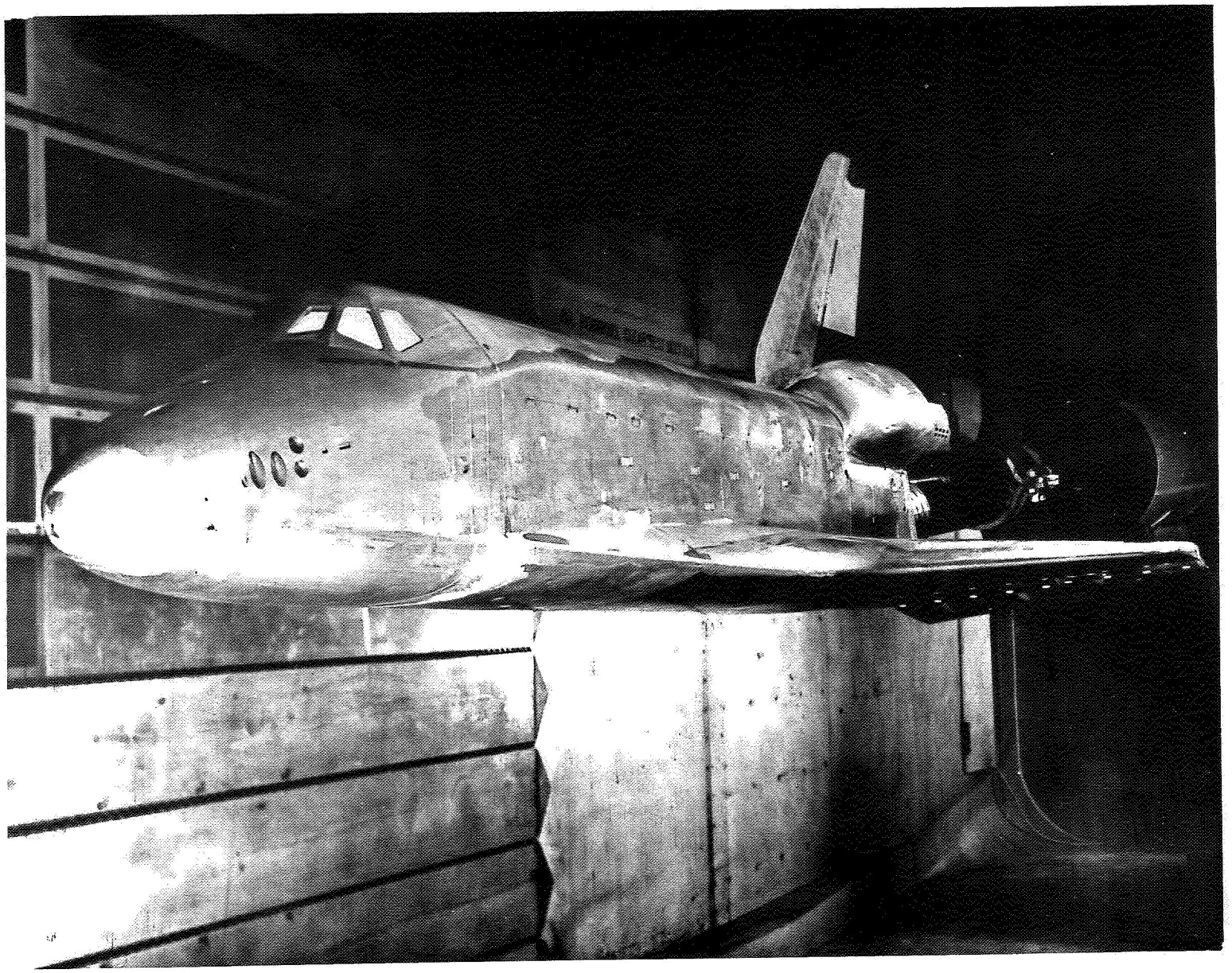
Tap 1 is on the heat shield under the MPS nozzle.

Tap 3 is in the OMS nozzle.

TAP	W.P., in.	B.P. in.	Area, ft^2
1	489	0	23.48
2	469	49	32.96
3	505	90	18.68
4	439	111	22.12
5	428	99	30.88
6	386	108	45.84
7	305	114	71.92
8	303	0	34.40
9	471	130	78.00
10	390	60	78.52
11	390	-60	
			436.80

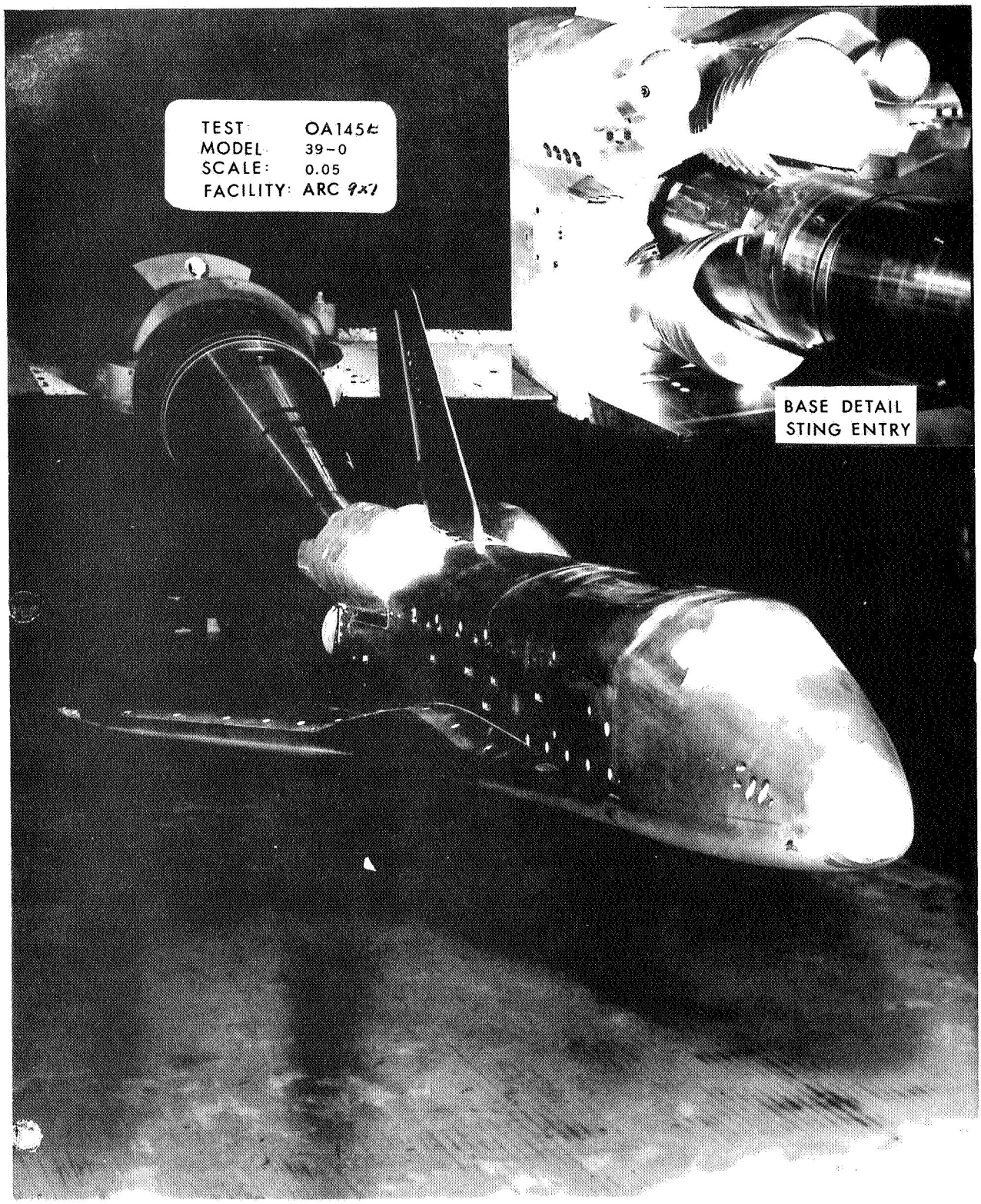


h. Base Pressure Tap Locations
Figure 2. Concluded.



a. Model Installed in 11 x 11 Foot Test Section (OA145A)

Figure 3. Model installation photographs.



b. Model Installed in 9 x 7 Foot Test Section with Base Detail (OA145B)
Figure 3. Concluded.

DATA FIGURES

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPOBRK	RUDDER	RN/L
R2H002	○	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H003	□	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	3.250
R2H004	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	4.000

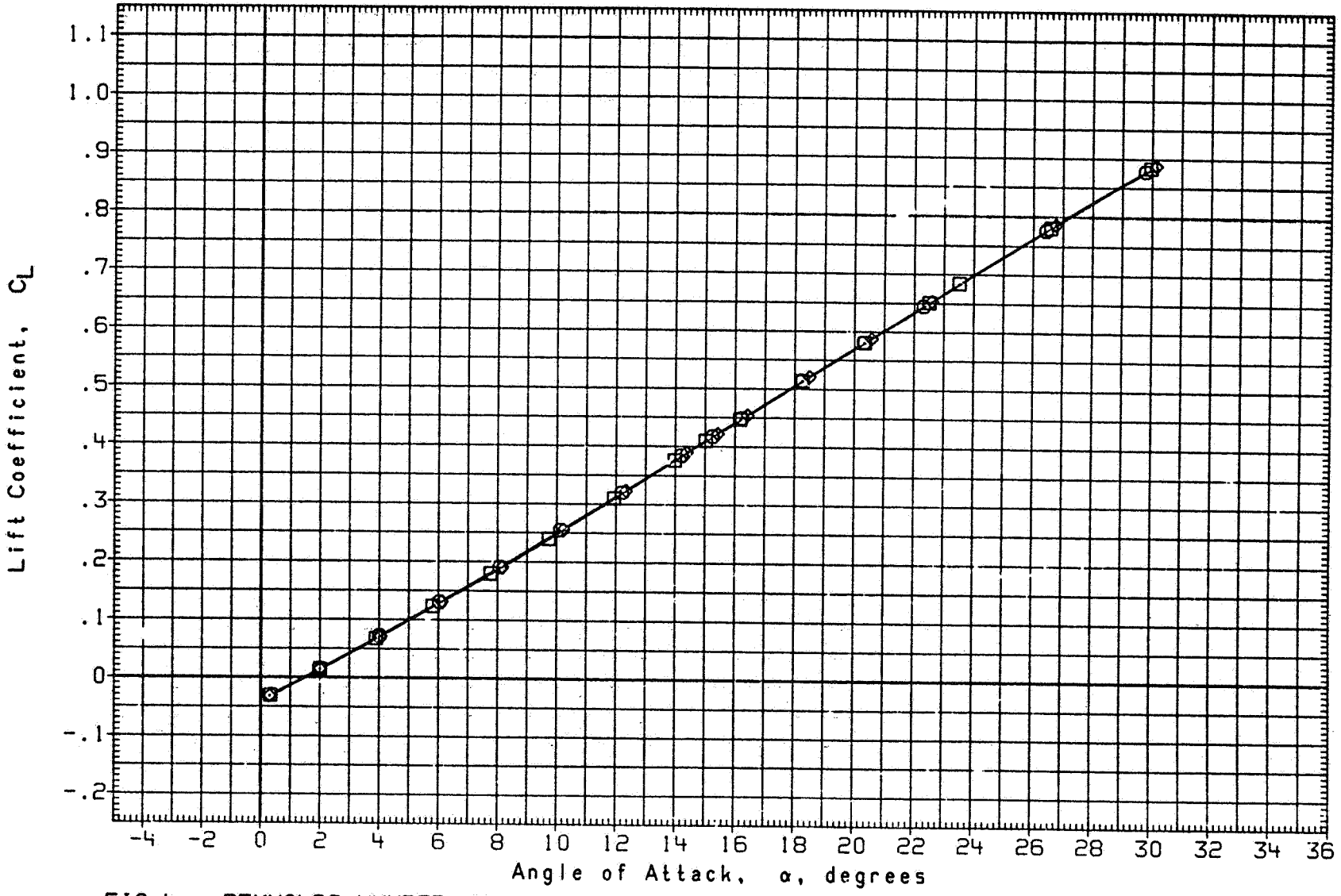


FIG.4 REYNOLDS NUMBER EFFECT ON LONGITUDINAL DATA

(A)MACH = 2.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	○	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H003	□	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	3.250
R2H004	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	4.000

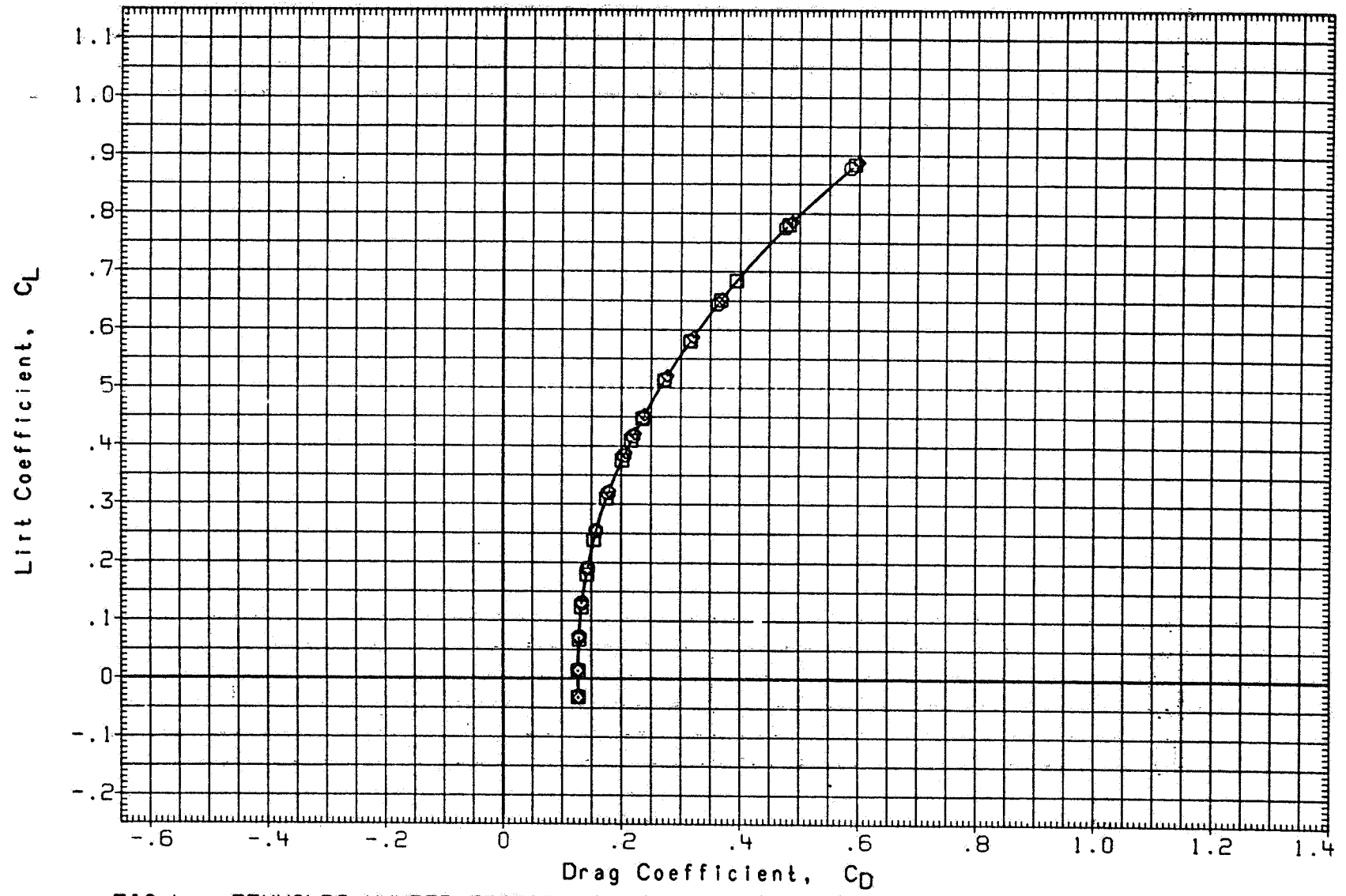


FIG.4 REYNOLDS NUMBER EFFECT ON LONGITUDINAL DATA

(A)MACH = 2.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	RDFLAP	SPDBRK	RUDDER	RN/L
R2H002	○	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H003	□	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	3.250
R2H004	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	4.000

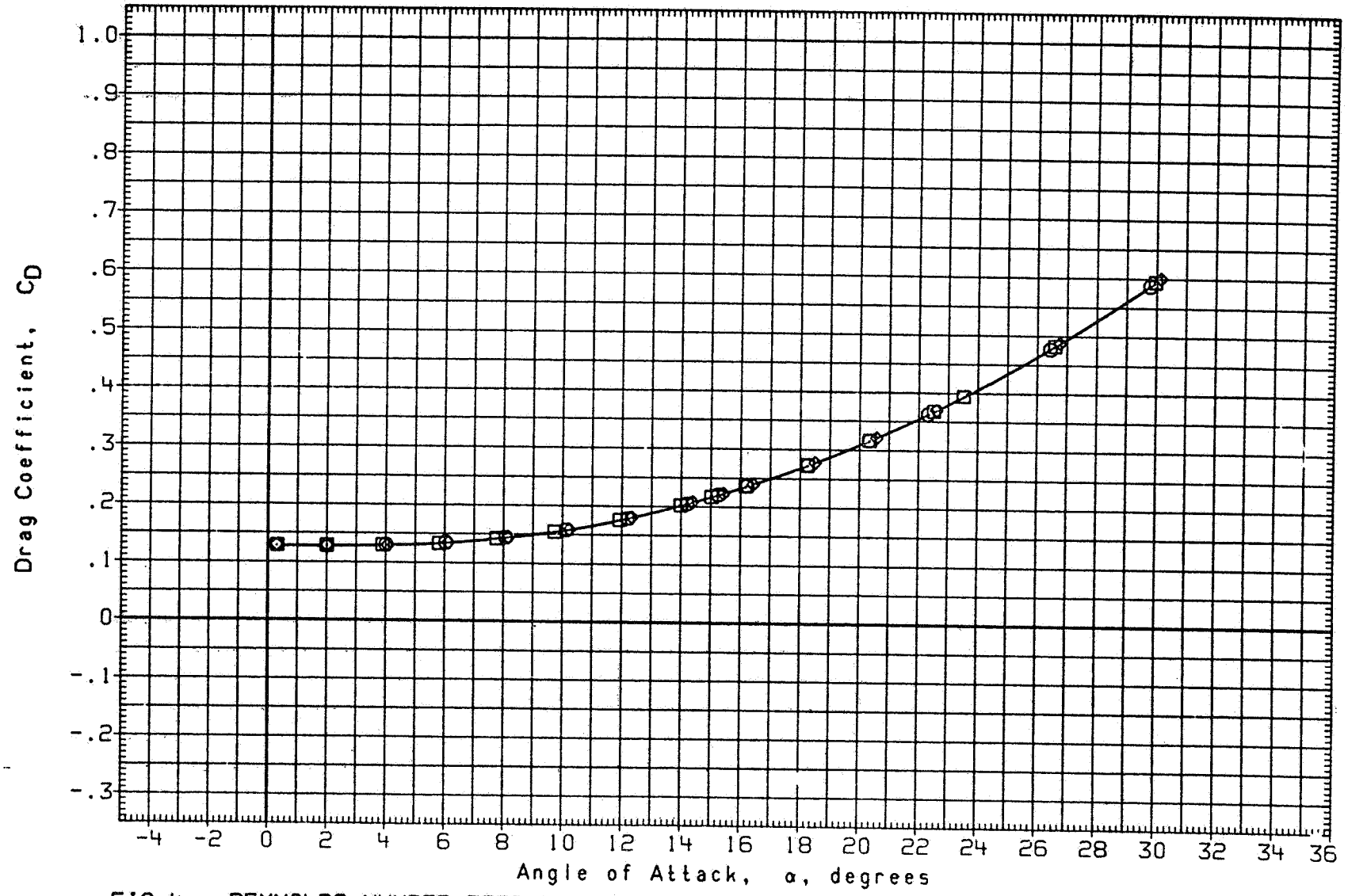


FIG.4 REYNOLDS NUMBER EFFECT ON LONGITUDINAL DATA

(A)MACH = 2.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	○	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H003	□	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	3.250
R2H004	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	4.000

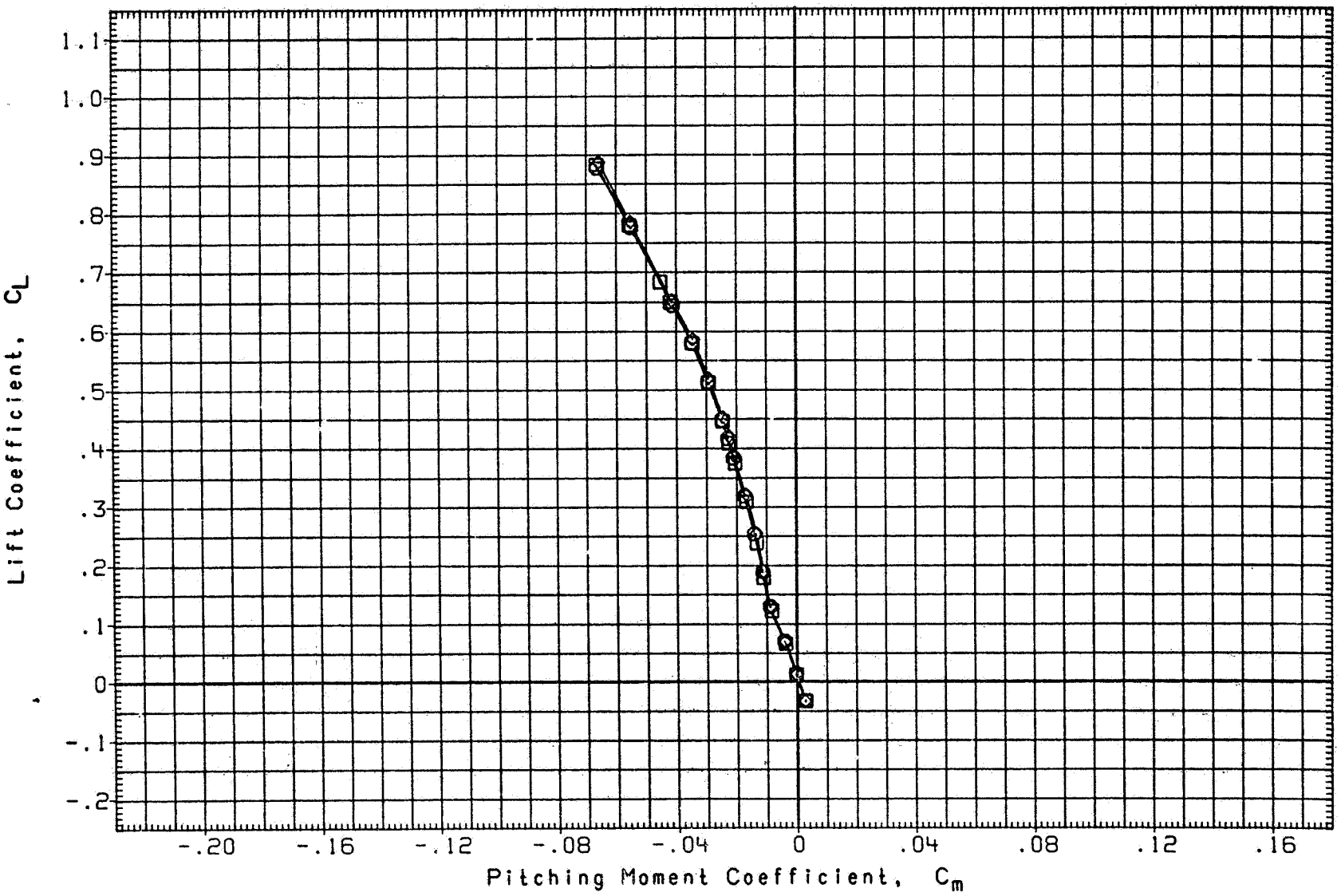


FIG.4 REYNOLDS NUMBER EFFECT ON LONGITUDINAL DATA

(A)MACH = 2.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	○	AMES 118-1-87 0A145C 01	.000	.000	000	.000	55.000	.000	2.500
R2H003	□	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	3.250
R2H004	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	4.000

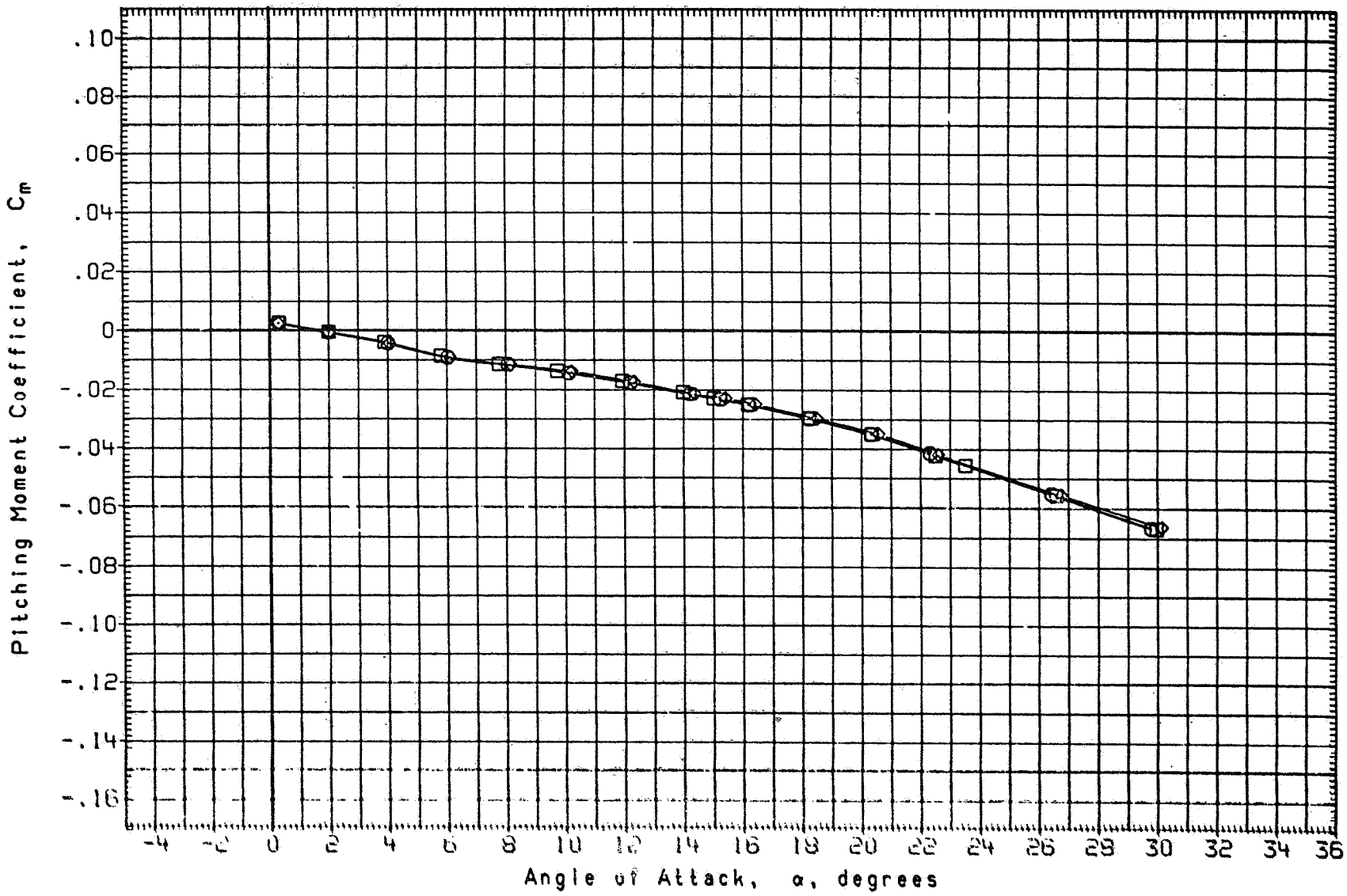


FIG.4 REYNOLDS NUMBER EFFECT ON LONGITUDINAL DATA

(A)MACH = 2.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	○	AMES 118-1-87 OA145C 01	.000	.000	.000	000	55.000	.000	2.500
R2H003	□	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55 000	.000	3.250
R2H004	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	4.000

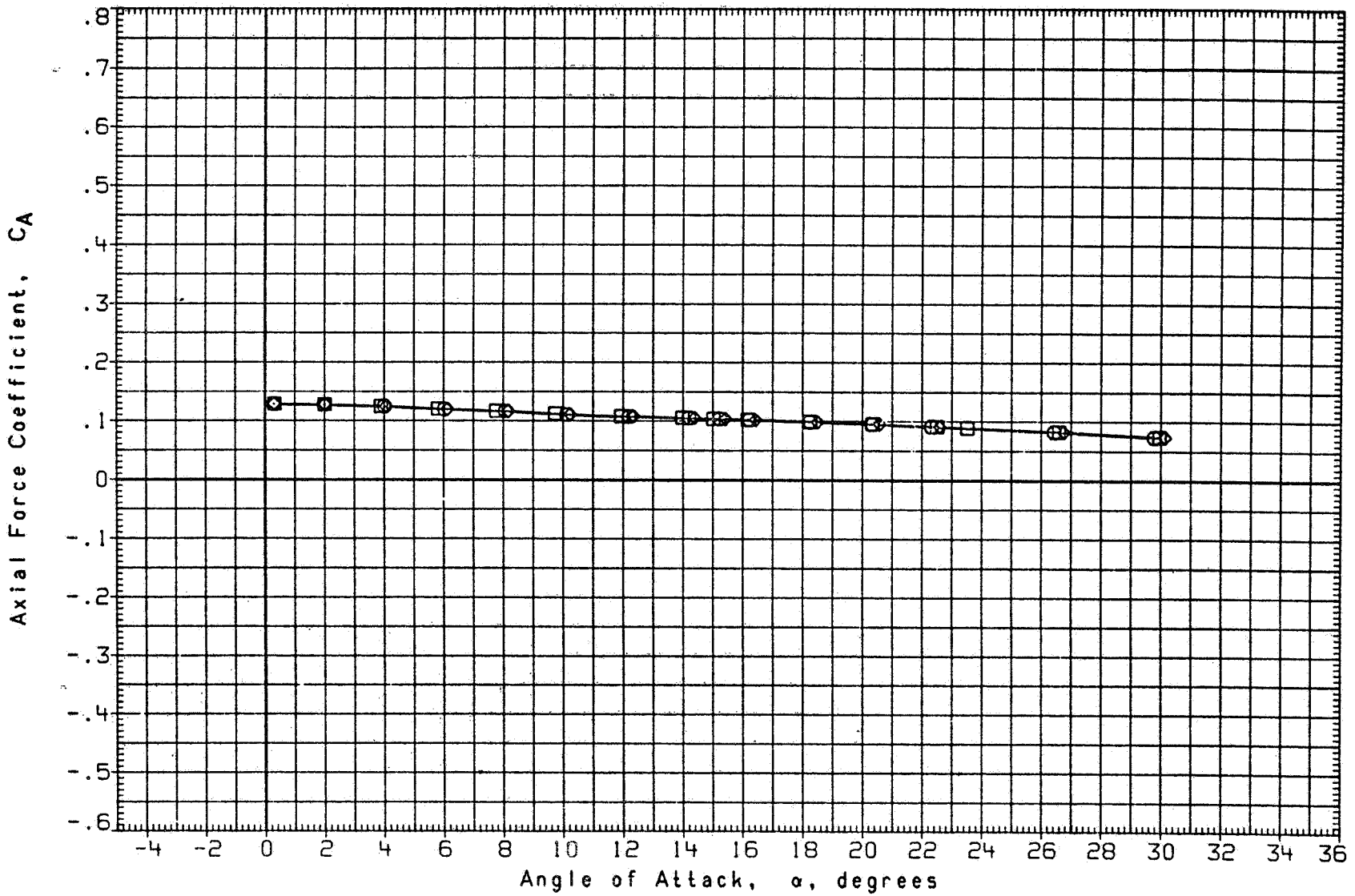


FIG.4 REYNOLDS NUMBER EFFECT ON LONGITUDINAL DATA

(A)MACH = 2.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

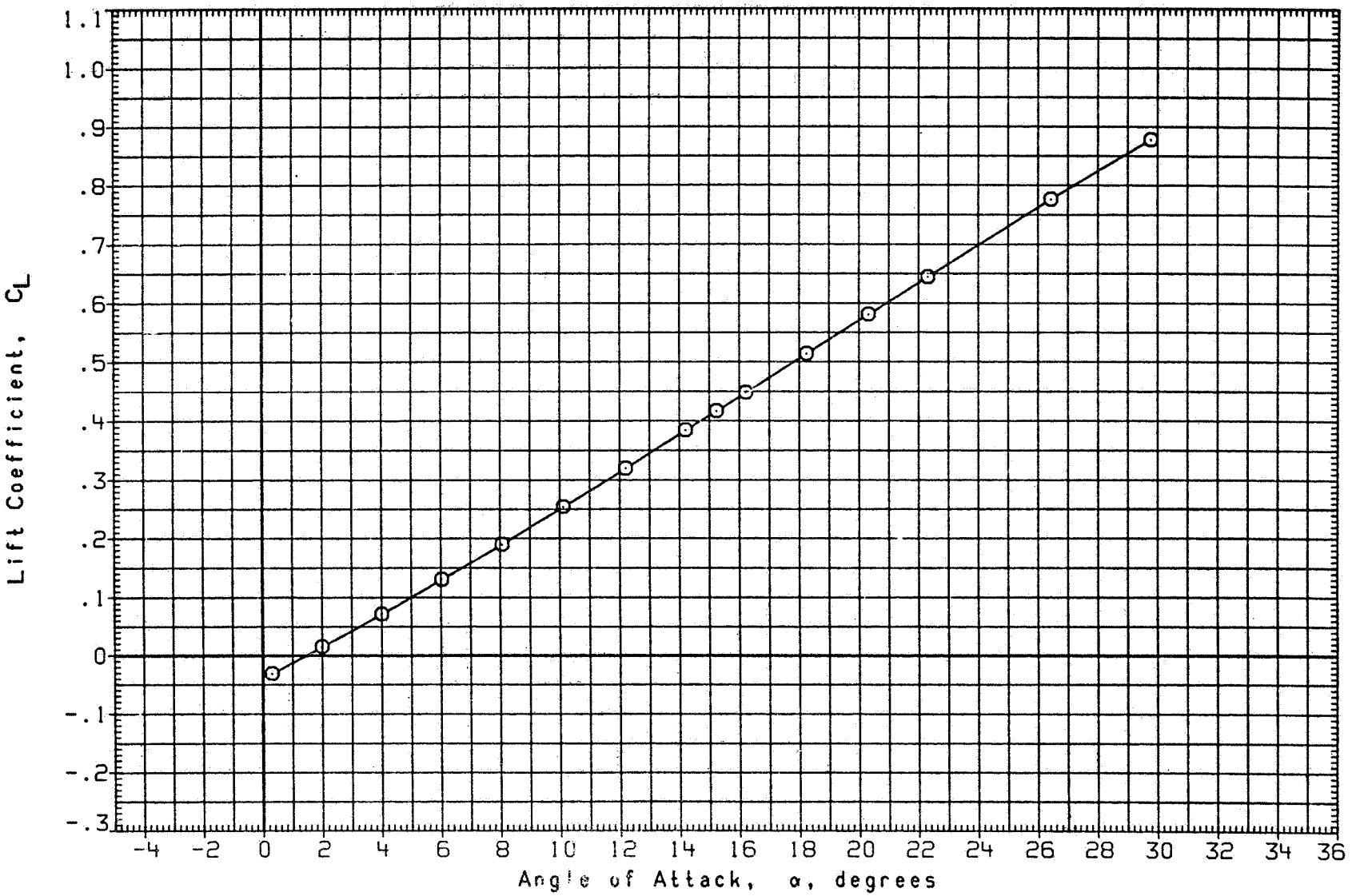


FIG.5 LONGITUDINAL STABILITY

(A)MACH = 2.49

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPOBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

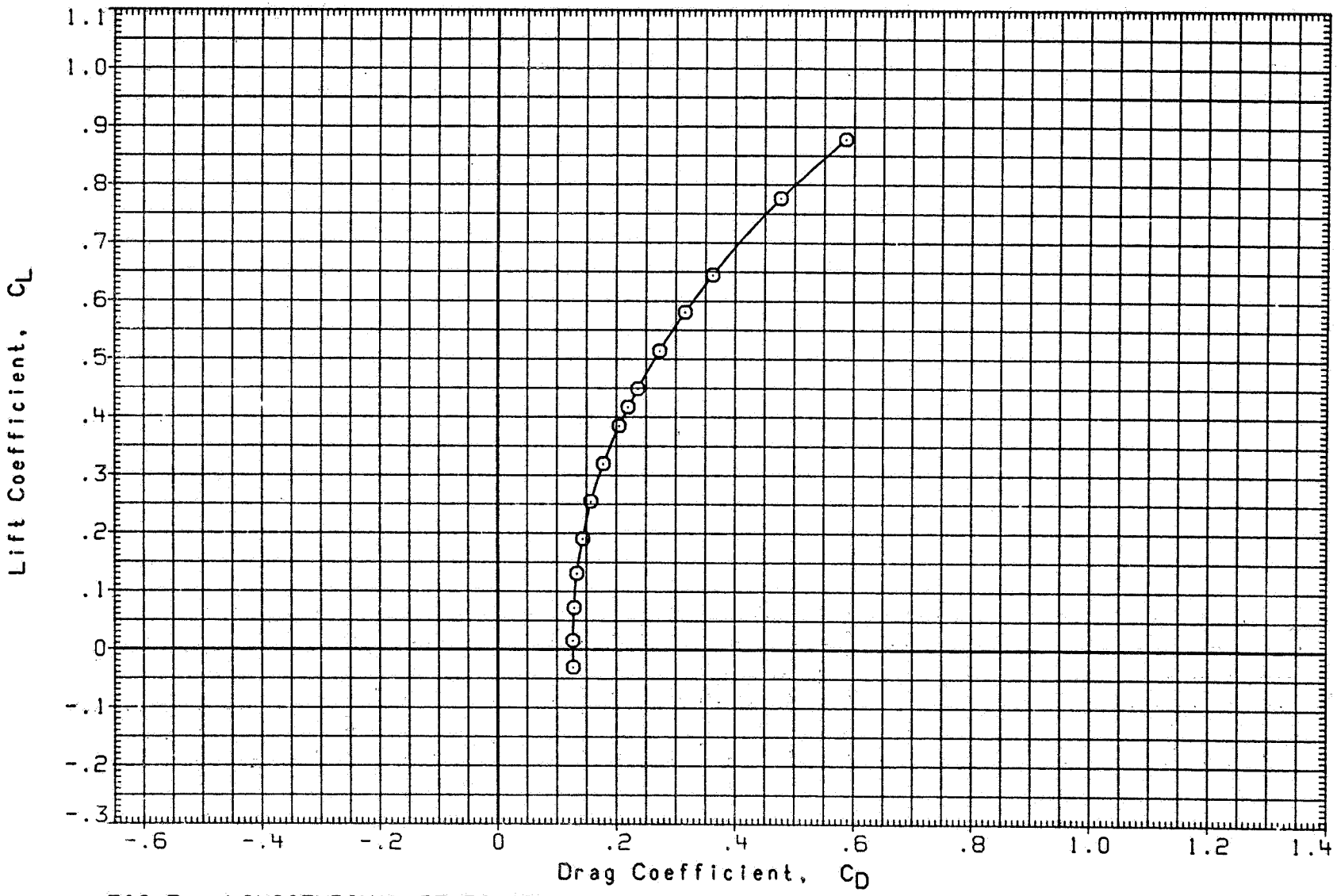


FIG.5 LONGITUDINAL STABILITY

(A)MACH = 2.49

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

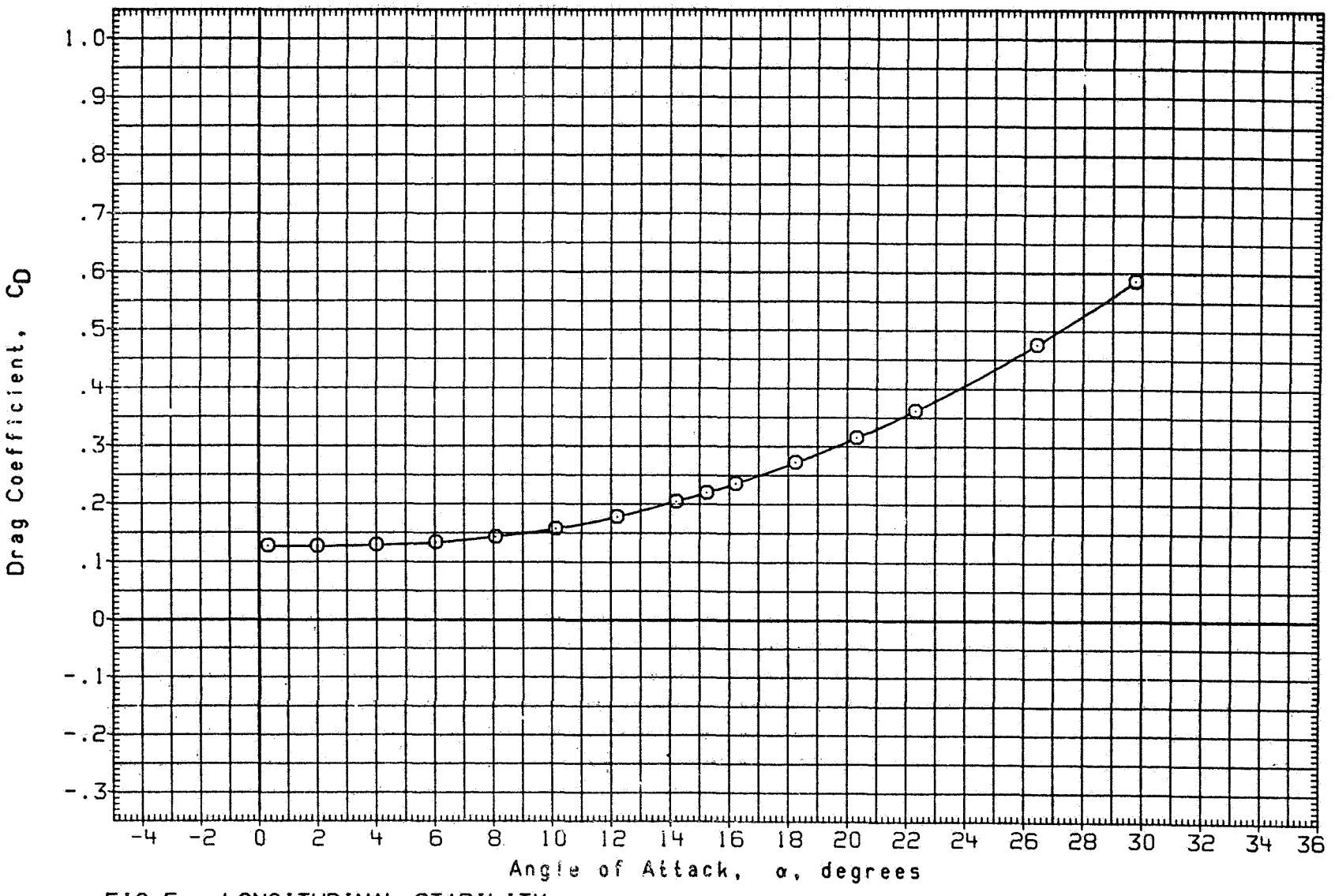


FIG.5 LONGITUDINAL STABILITY

(A)MACH = 2.49

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

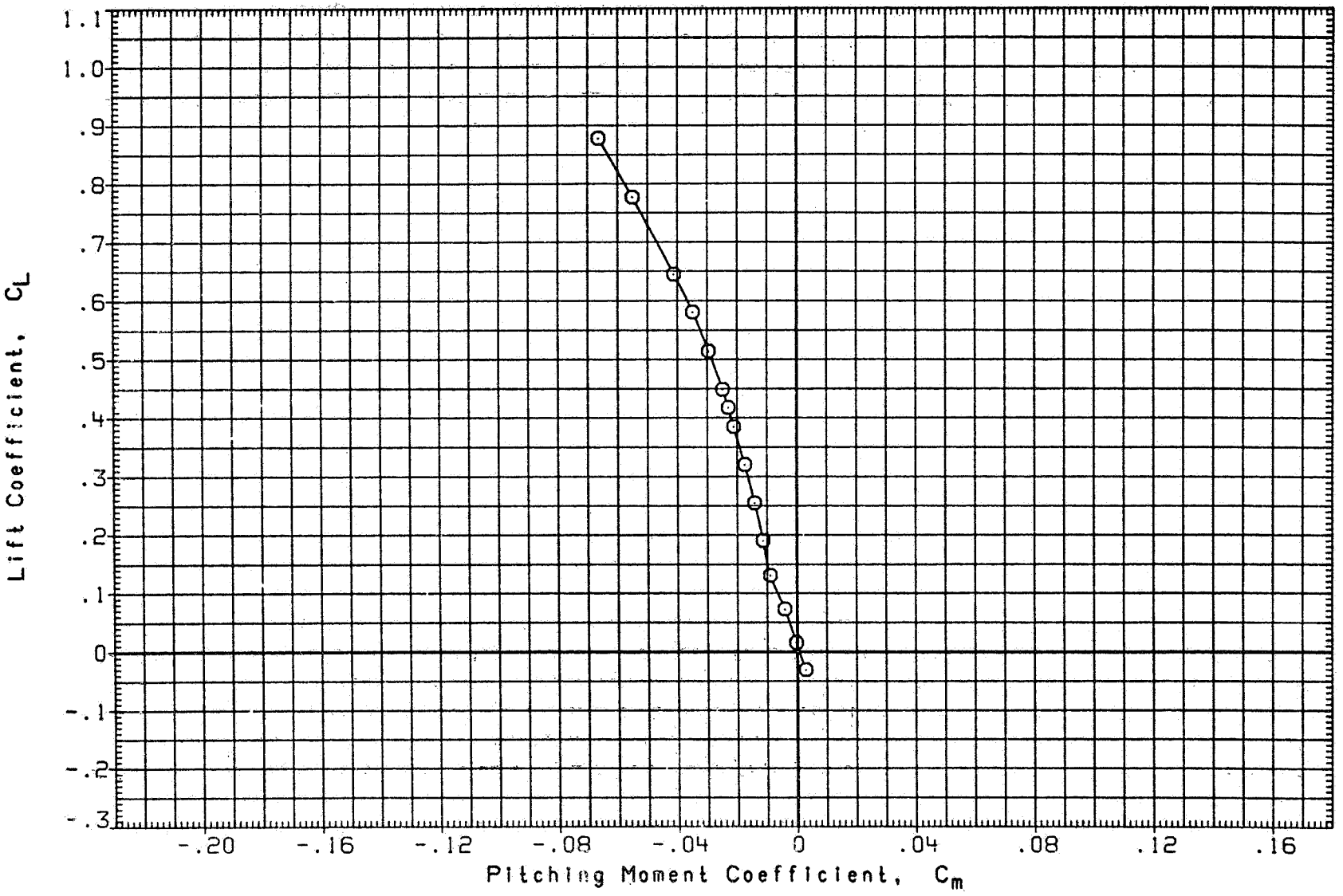


FIG.5 LONGITUDINAL STABILITY

(A)MACH = 2.49

DATA SET	SYMBOL	CONFIGURATION
R2H002	O	AMES 118-1-87 0A145C 01

BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
.000	.000	.000	.000	55.000	.000	2.500

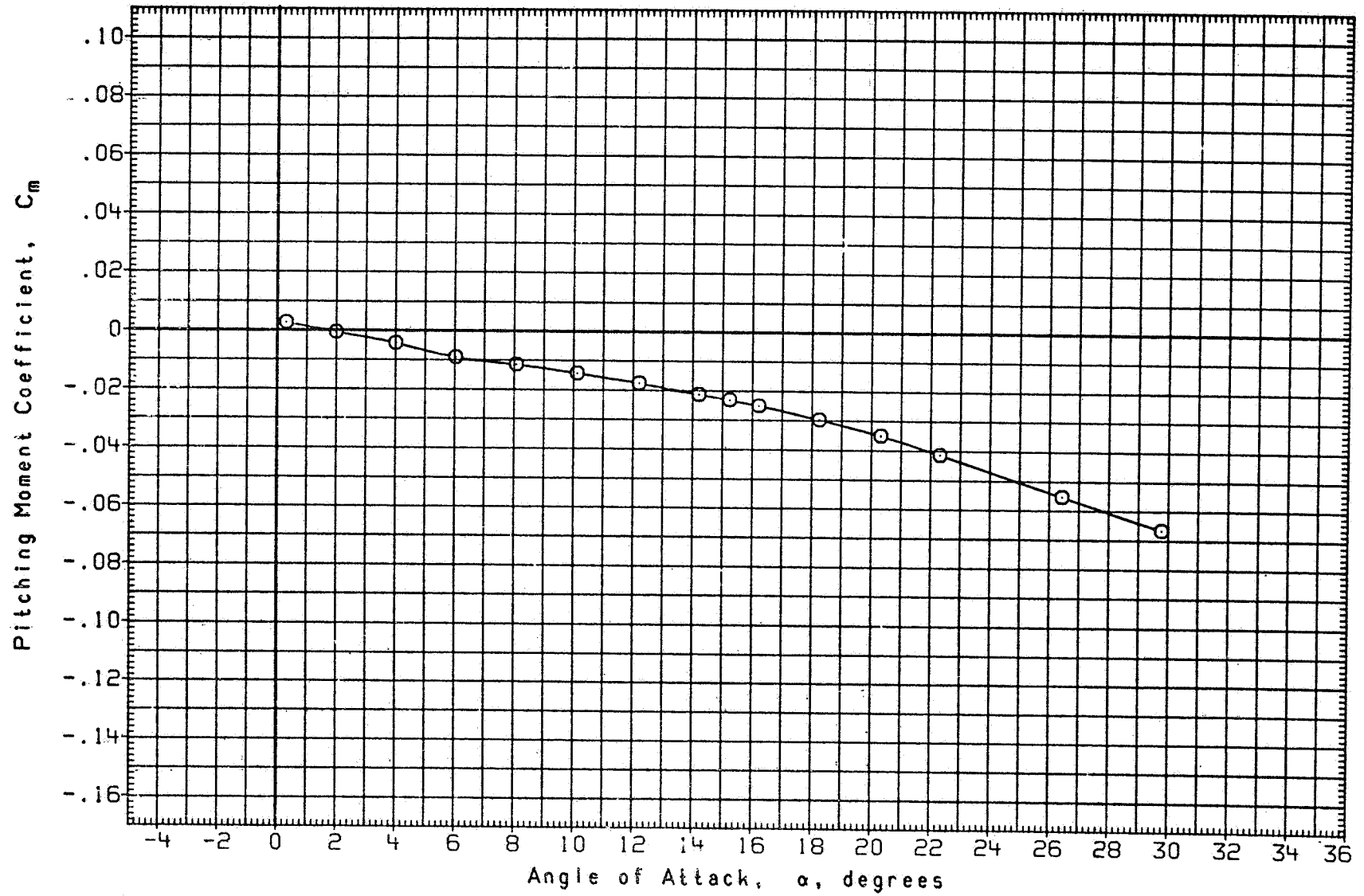


FIG.5 LONGITUDINAL STABILITY

(A)MACH = 2.49

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500

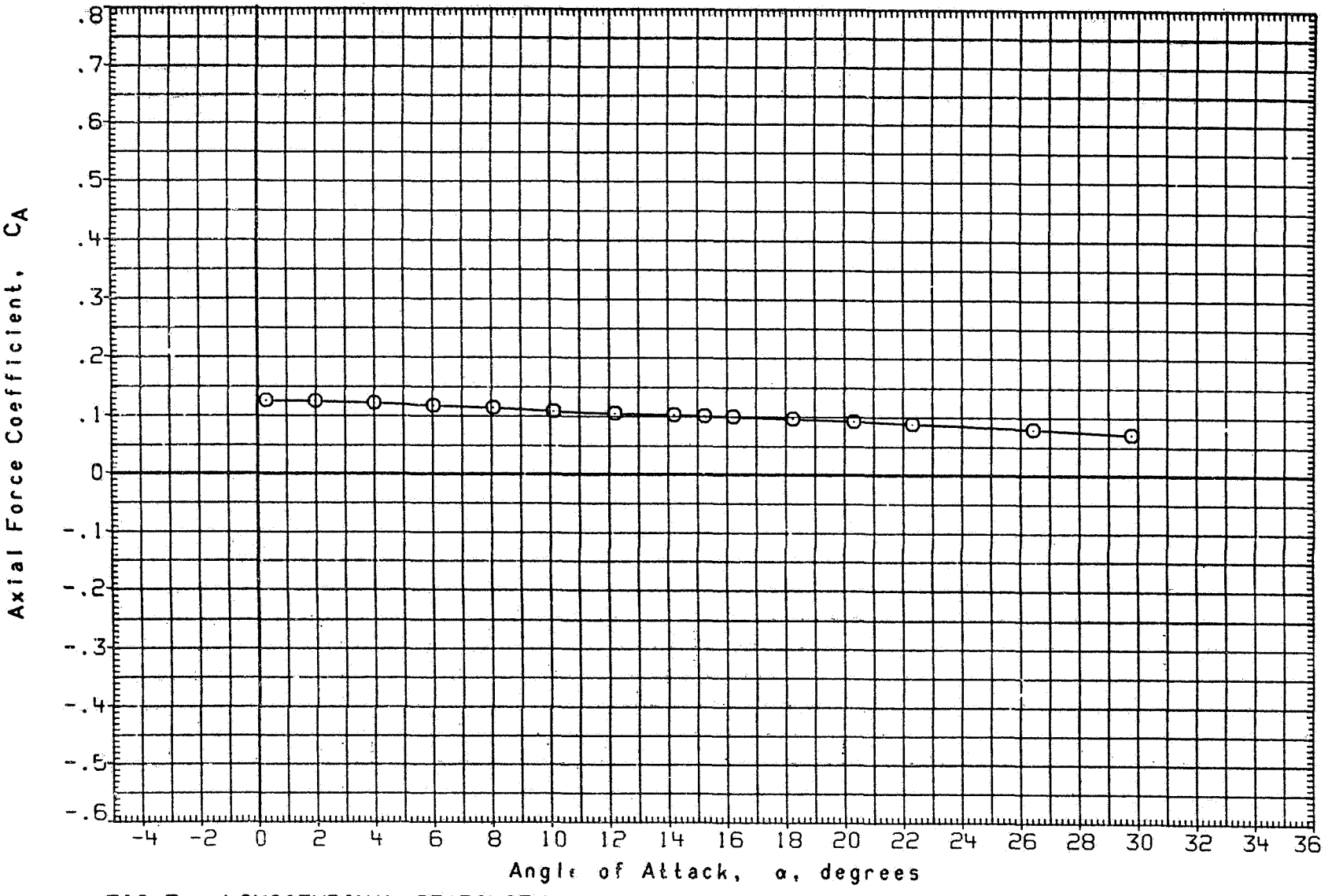


FIG.5 LONGITUDINAL STABILITY

(A)MACH = 2.49

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

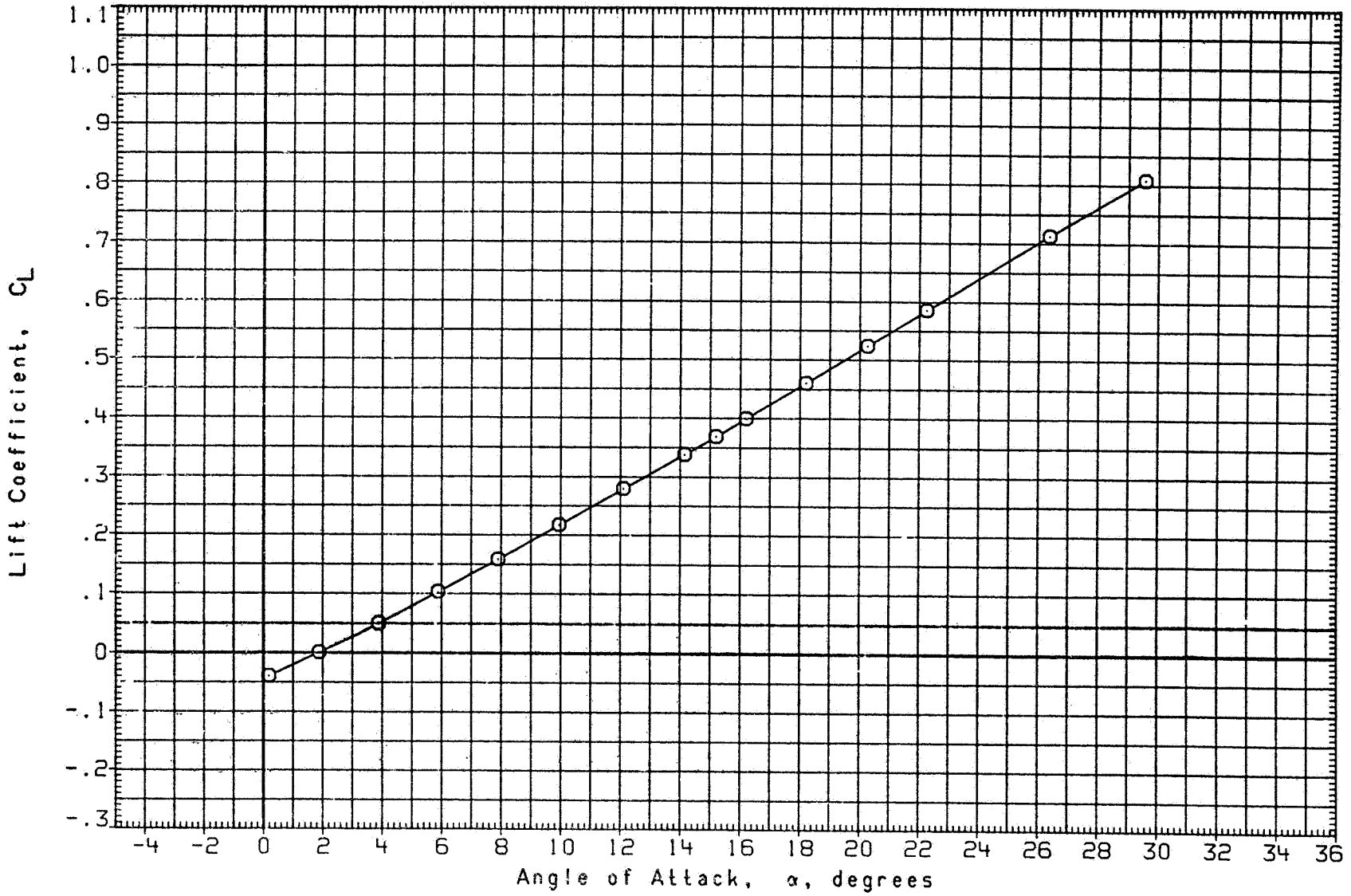


FIG.5 LONGITUDINAL STABILITY

(B)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

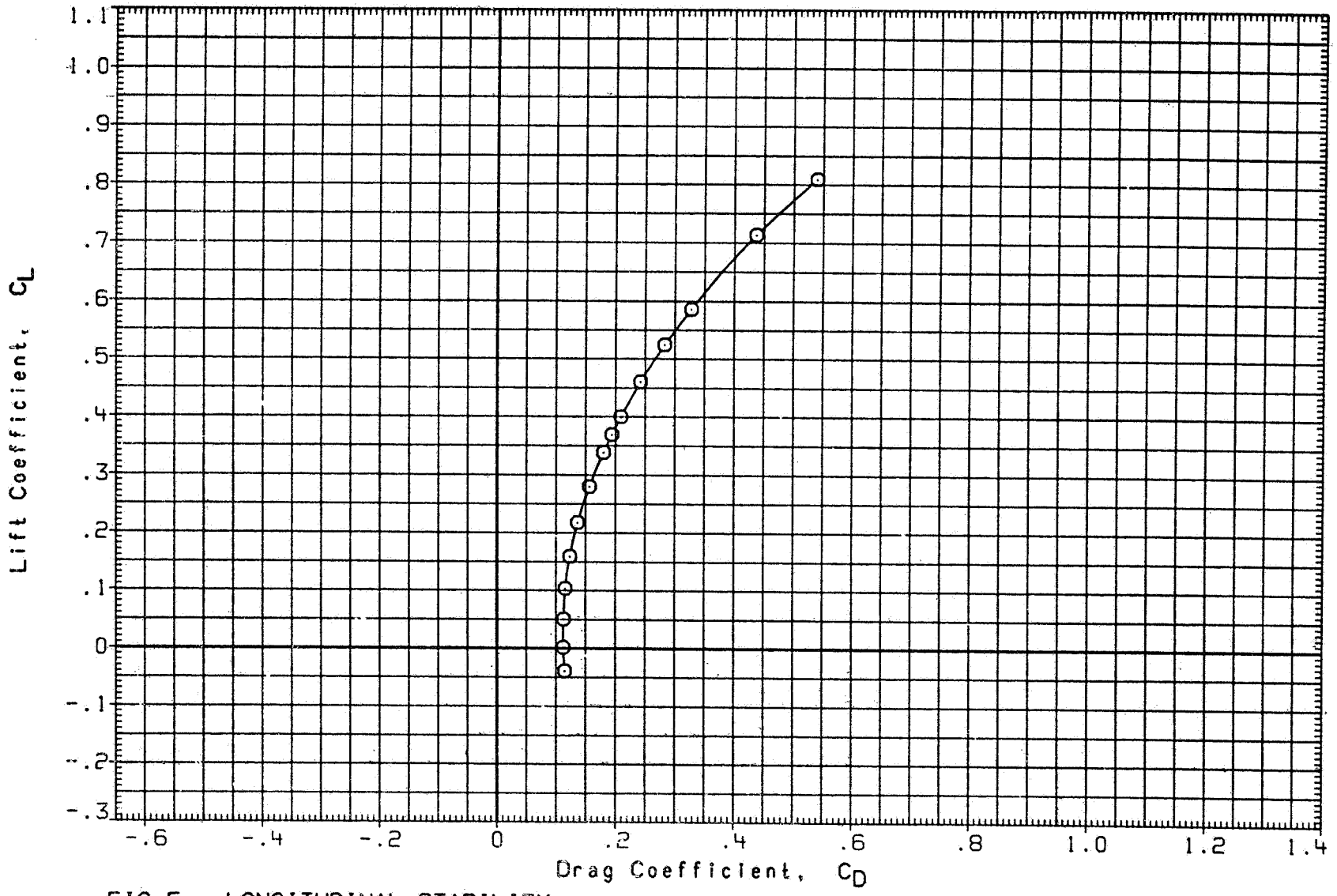


FIG.5 LONGITUDINAL STABILITY

(B)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

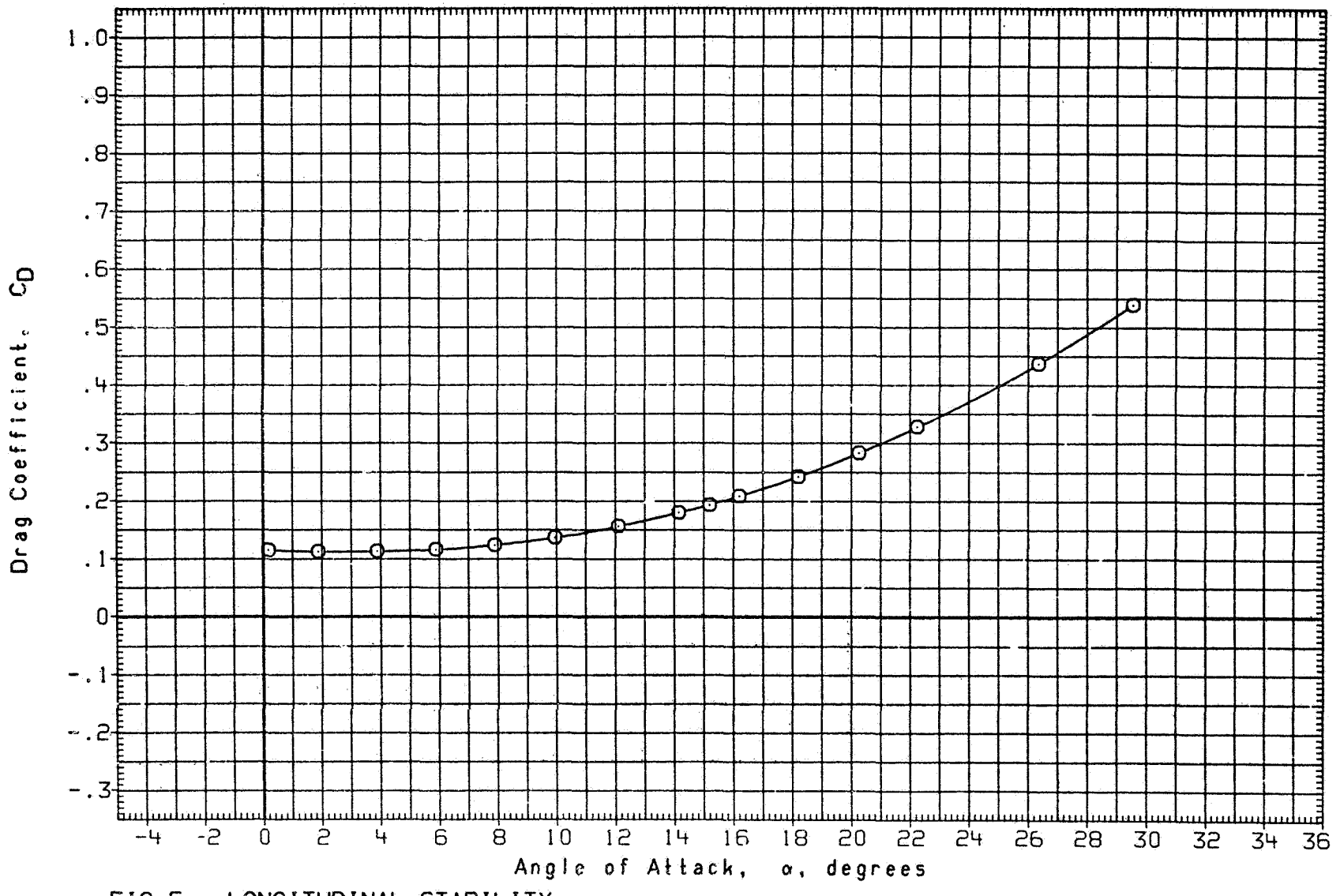


FIG.5 LONGITUDINAL STABILITY

(B)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
R2H002	O	AMES 118-1-87 0A145C 01

BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
.000	.000	.000	.000	55.000	.000	2.500

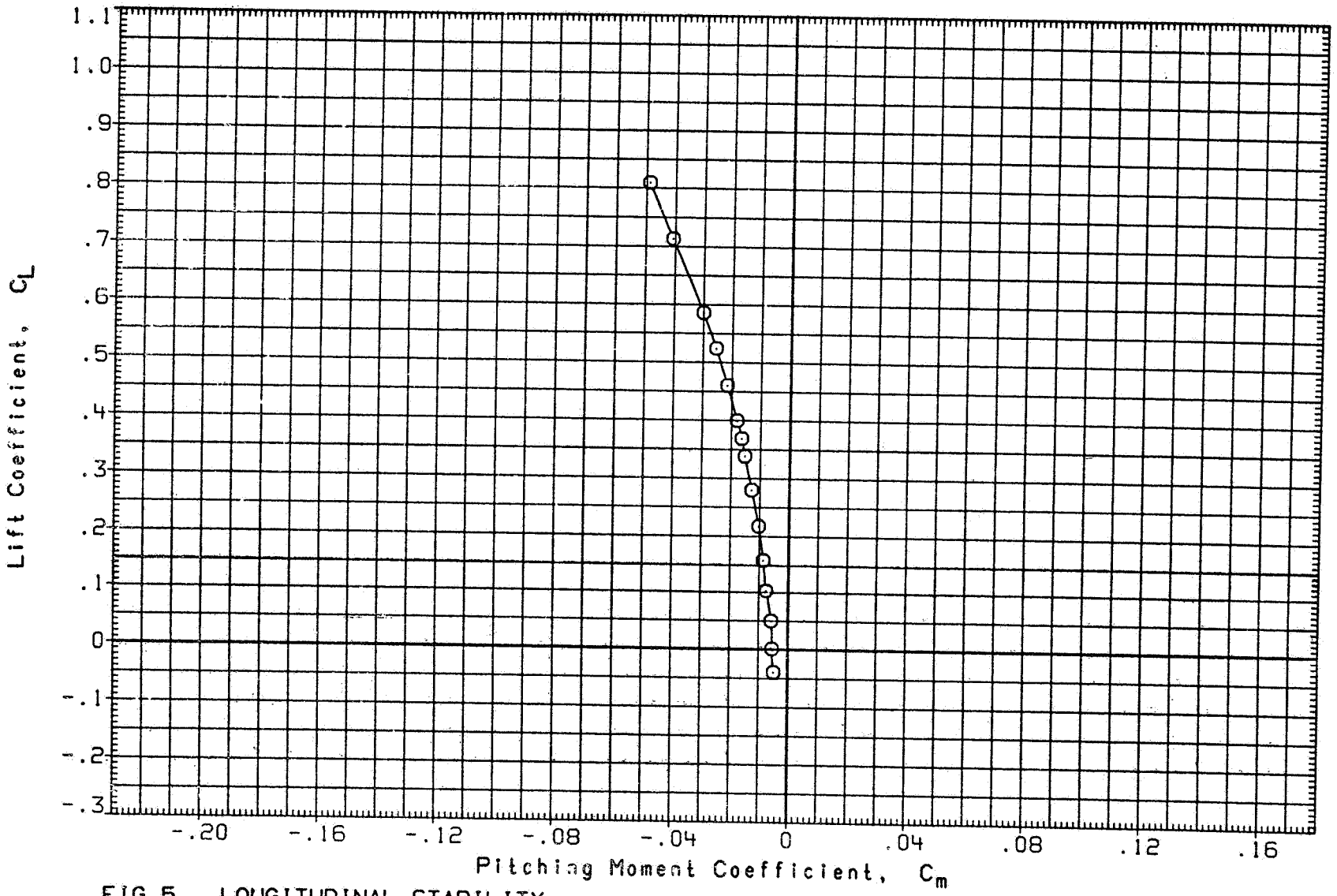


FIG.5 LONGITUDINAL STABILITY

(B)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500

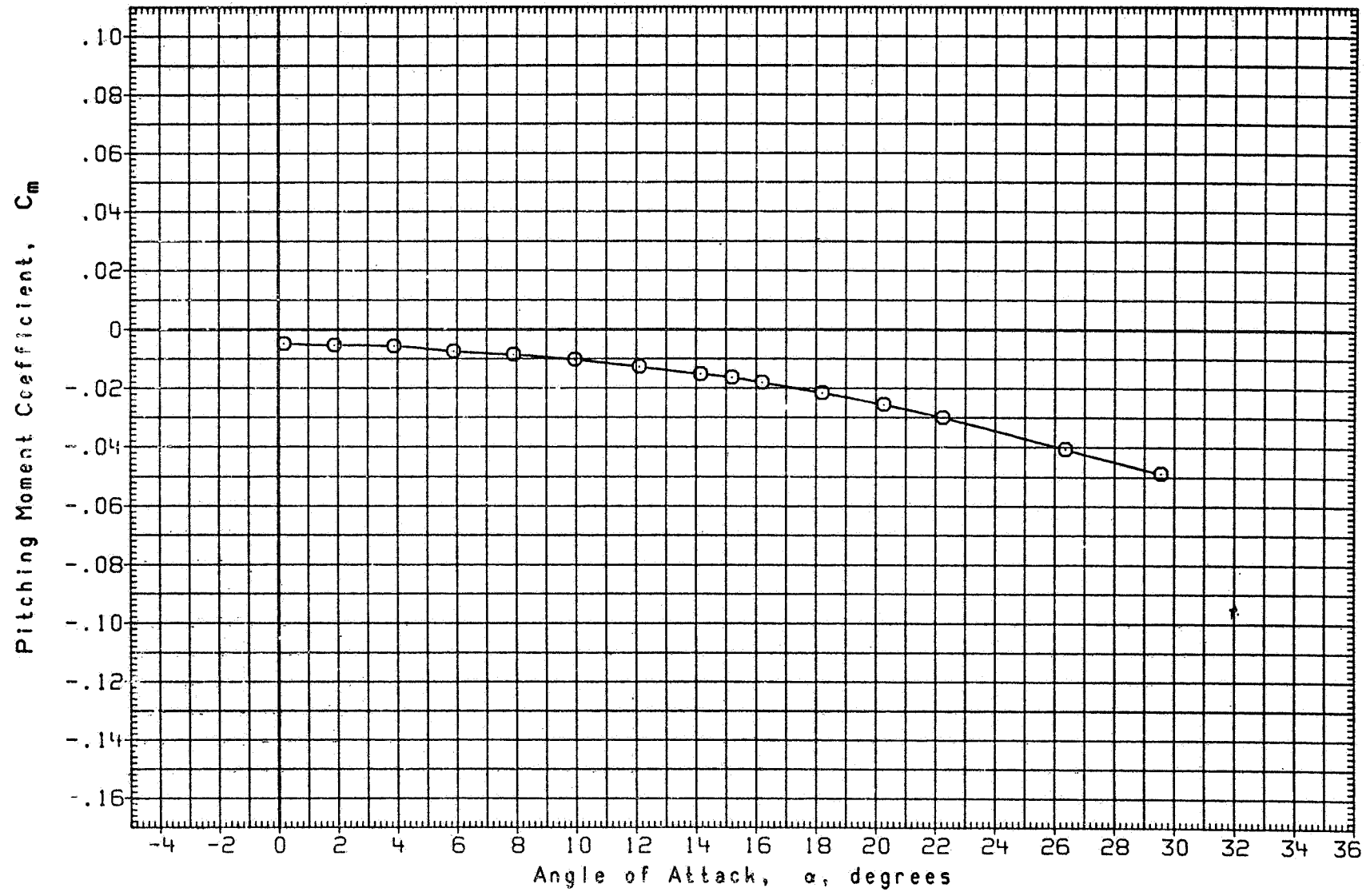


FIG.5 LONGITUDINAL STABILITY

(B)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

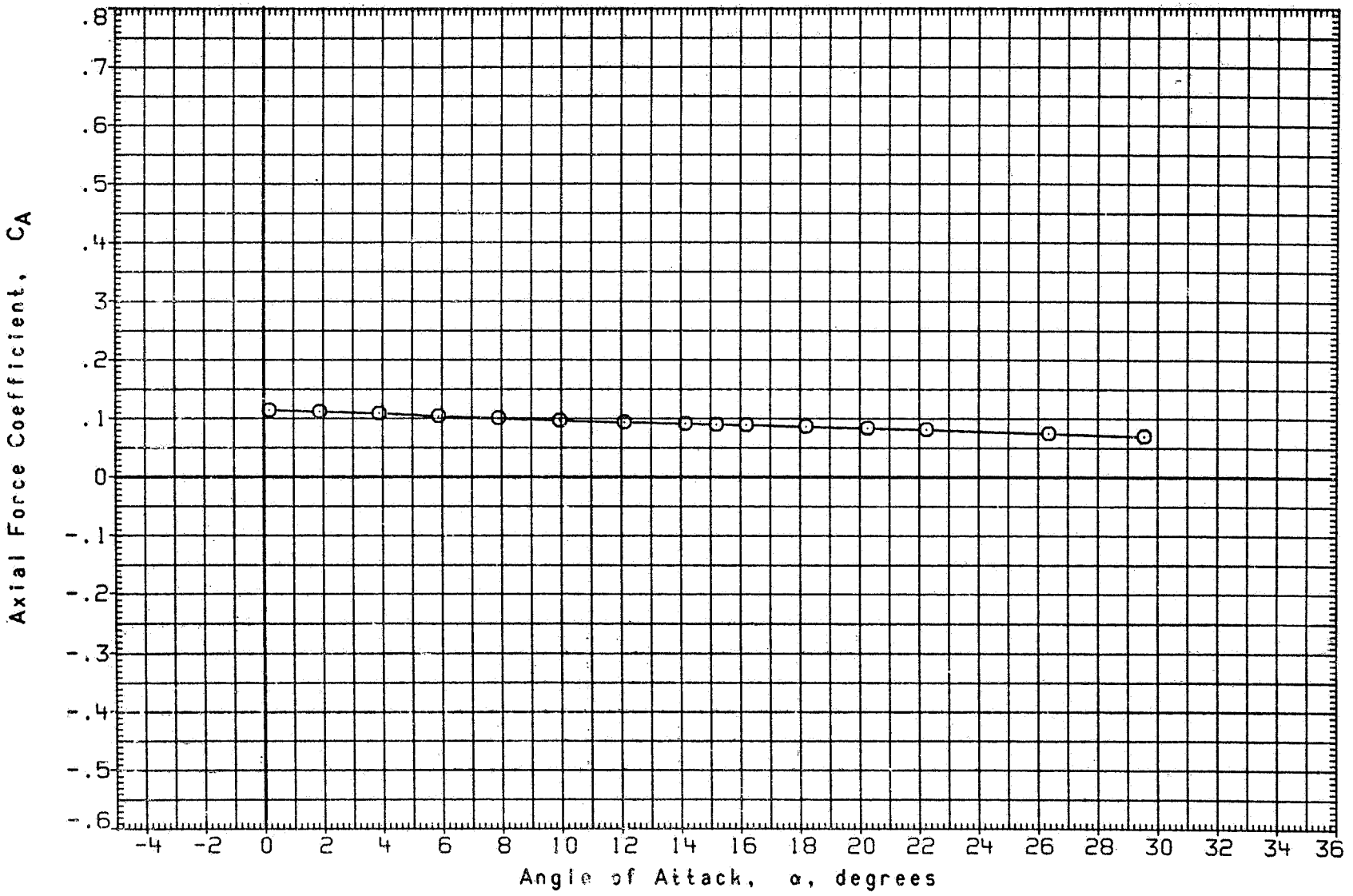


FIG.5 LONGITUDINAL STABILITY

(B)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BOFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

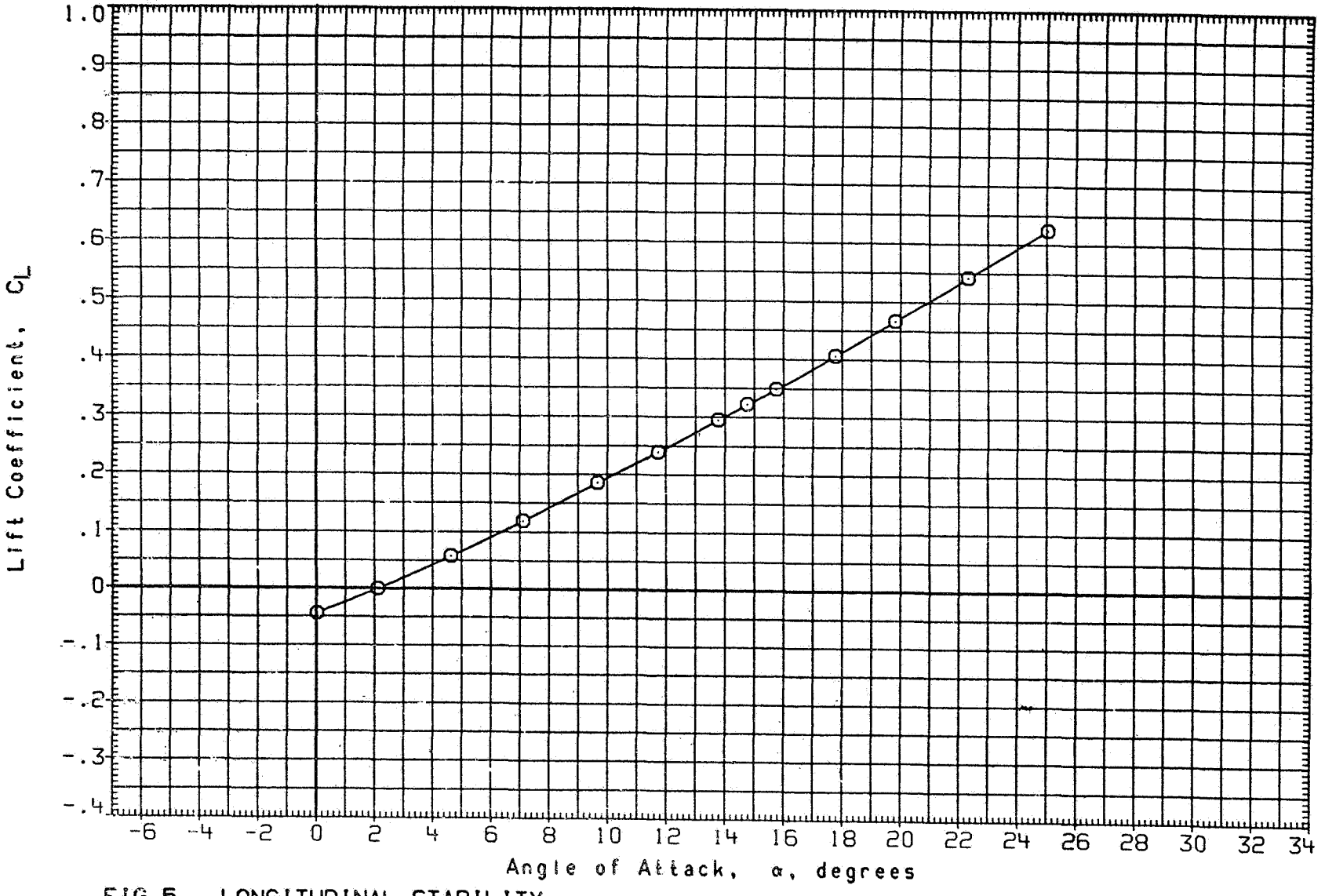


FIG.5 LONGITUDINAL STABILITY

(C)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION
R2H002	O	AMES 118-1-87 OA145C 01

BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
.000	.000	000	.000	55.000	.000	2.500

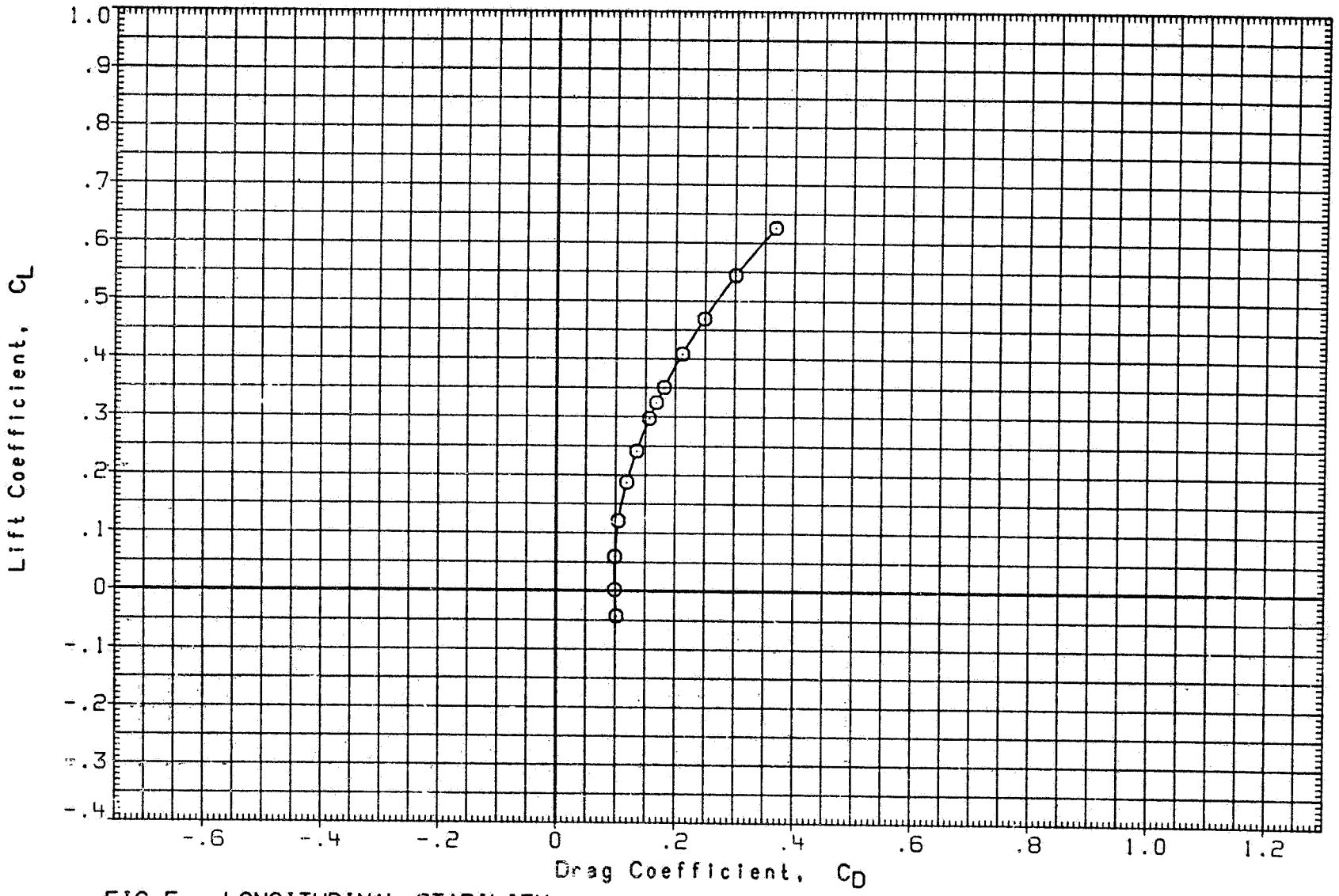


FIG.5 LONGITUDINAL STABILITY

(C)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

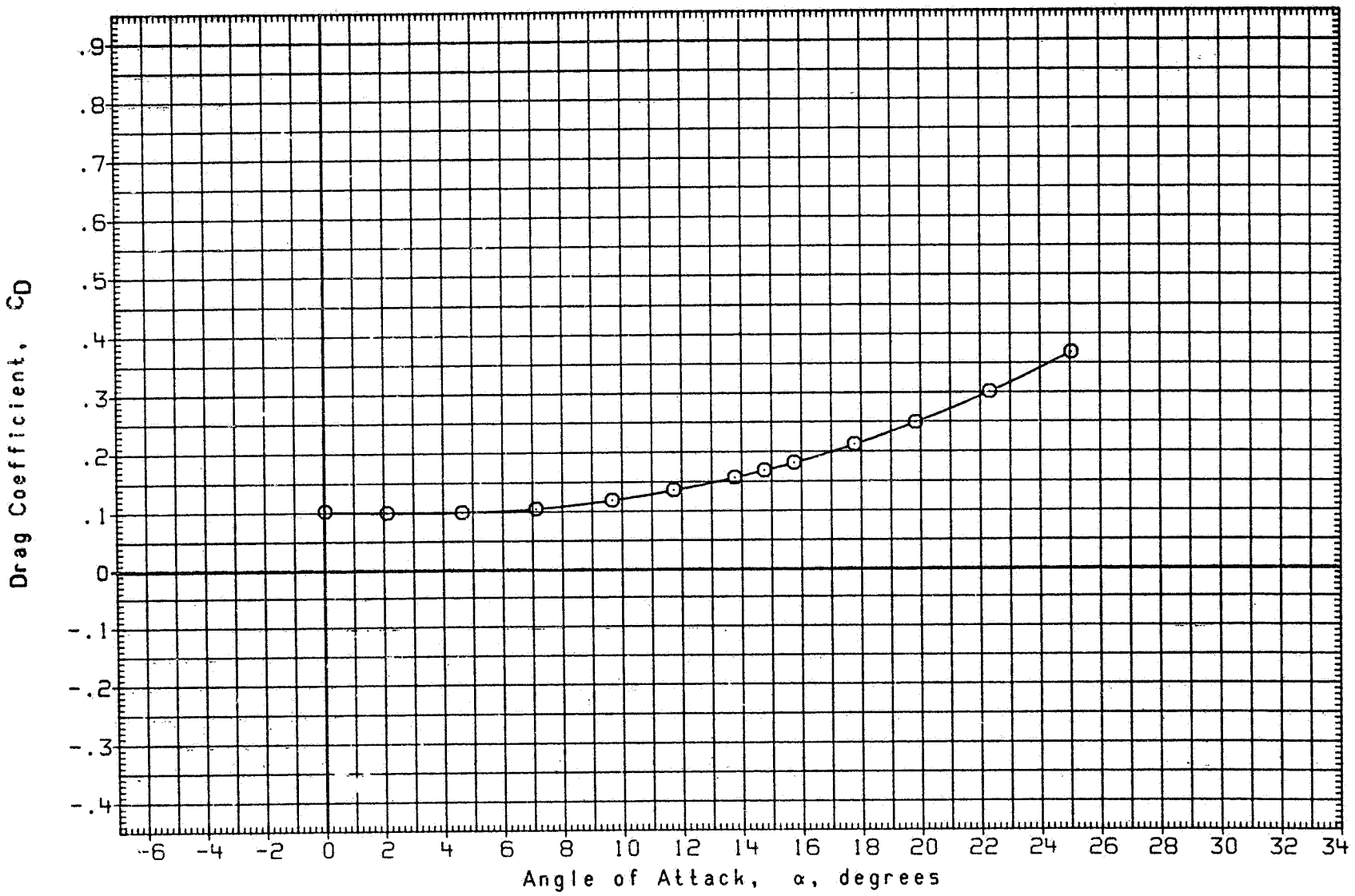


FIG.5 LONGITUDINAL STABILITY

(C)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	000	.000	55.000	.000	2.500

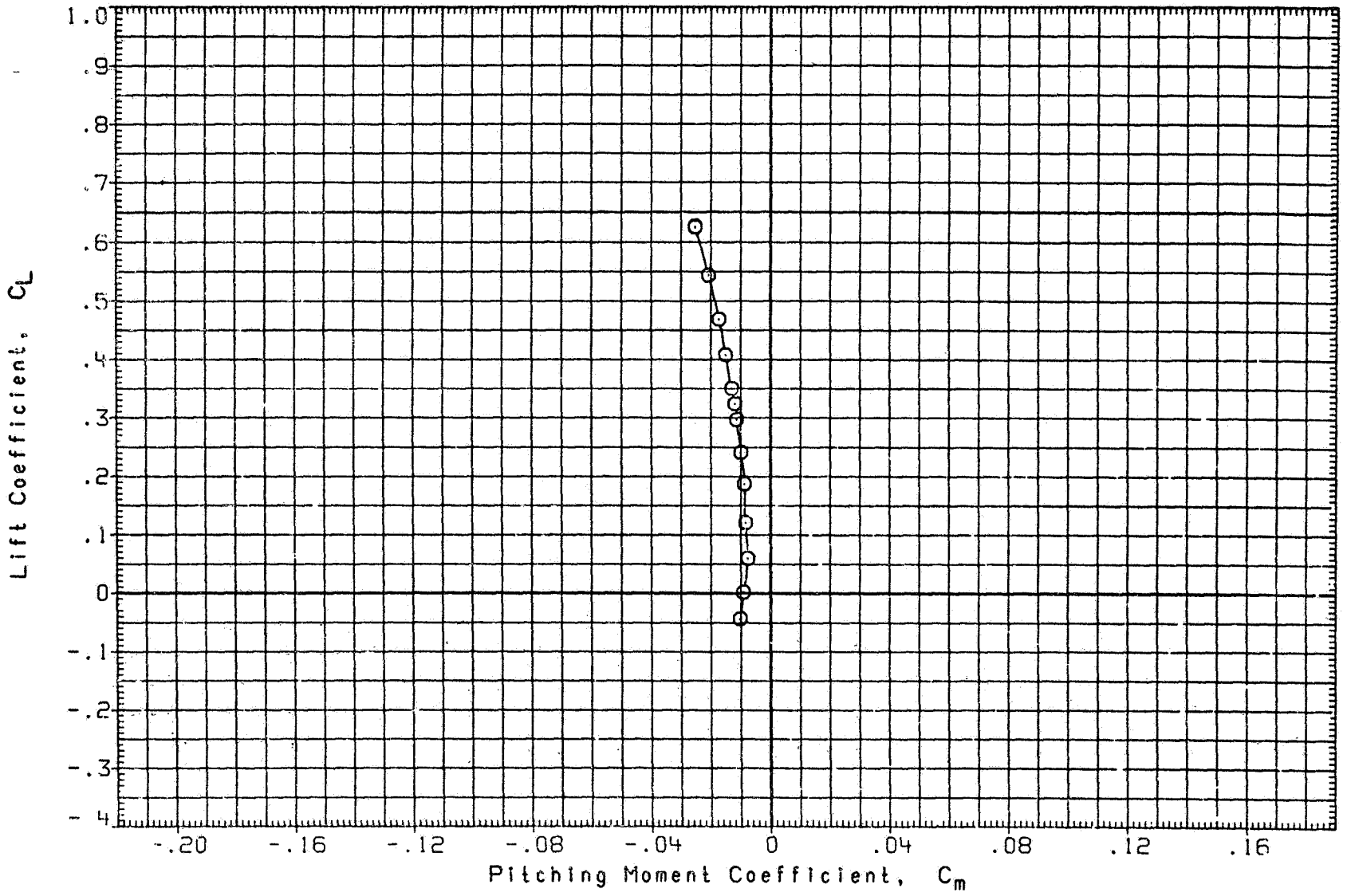


FIG.5 LONGITUDINAL STABILITY

(C)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

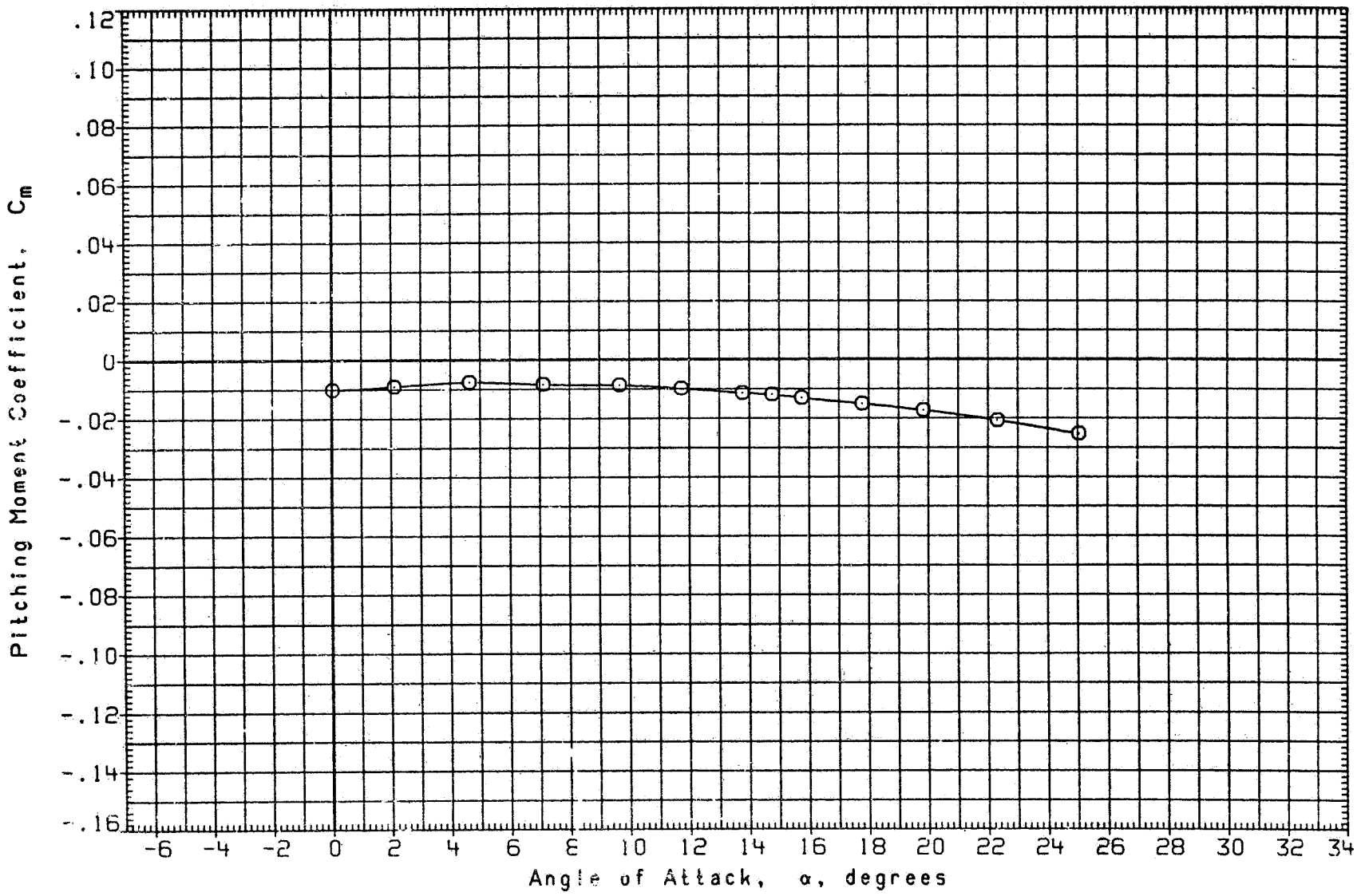


FIG.5 LONGITUDINAL STABILITY

(C)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H002	O	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500

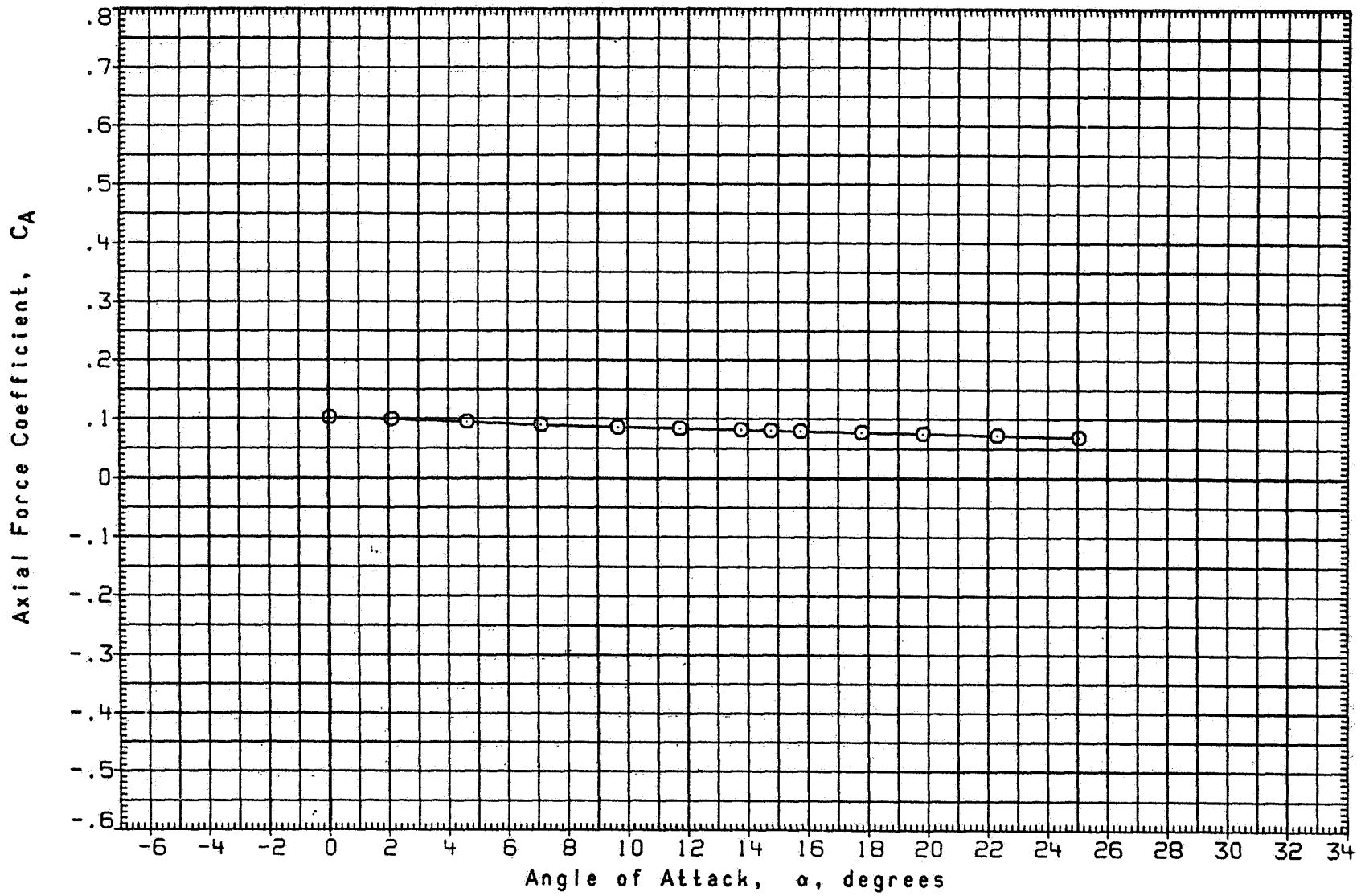


FIG.5 LONGITUDINAL STABILITY

(C)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H005	○	AMES 118-1-87 OA145C 01	5.000	.000	.000	.000	55.000	.000	2.500
R2H006	□	AMES 118-1-87 OA145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H007	◇	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H010	△	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	55.000	.000	2.500

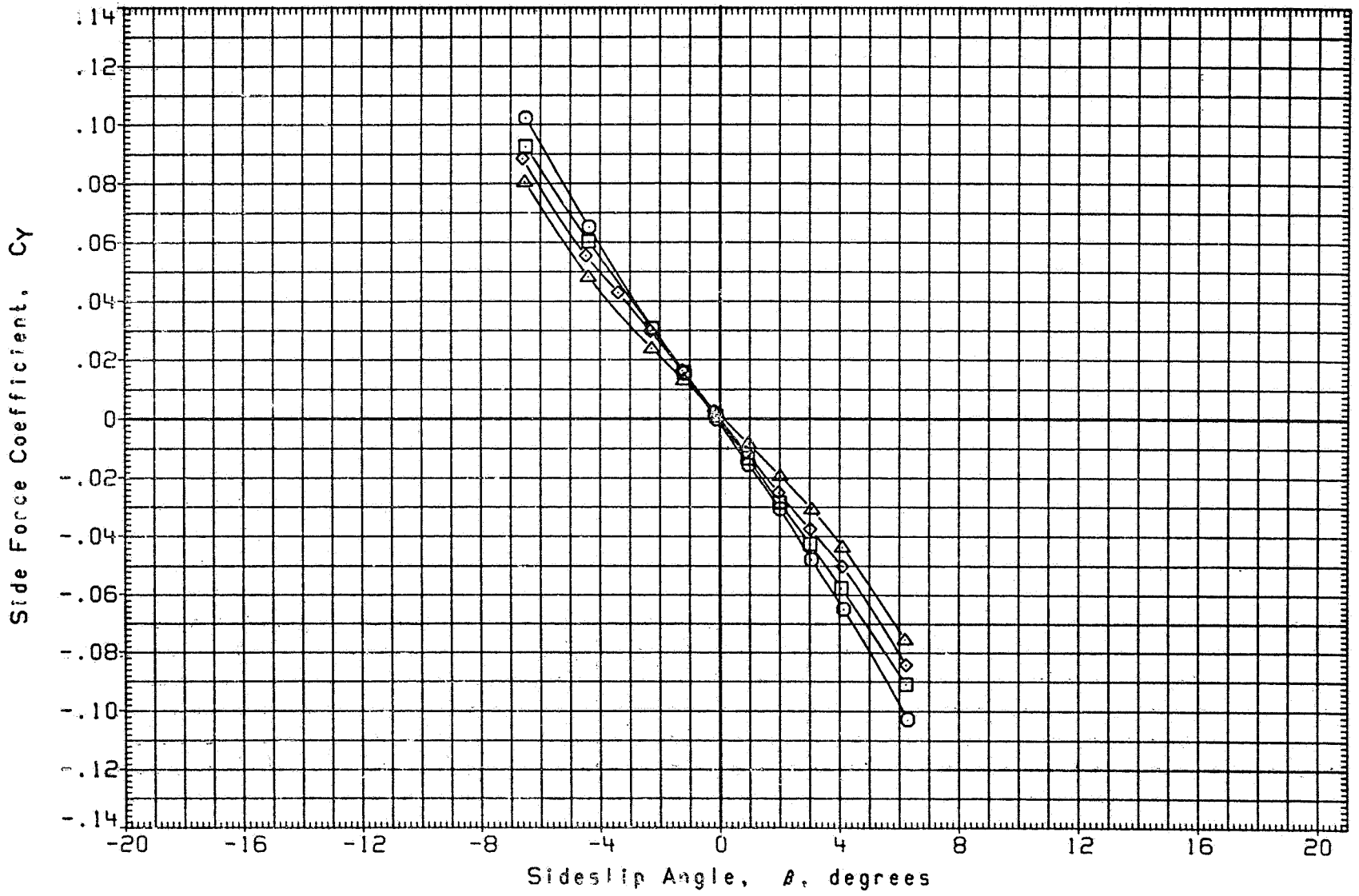


FIG.6 LATERAL-DIRECTIONAL STABILITY, SPEEDBRAKE=55 DEG

(A)MACH = 2.49

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H005	○	AMES 118-1-87 0A145C 01	5.000	.000	000	000	55.000	.000	2.500
R2H006	□	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H007	◇	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H010	△	AMES 118-1-87 0A145C 01	20.000	.000	000	.000	55.000	.000	2.500

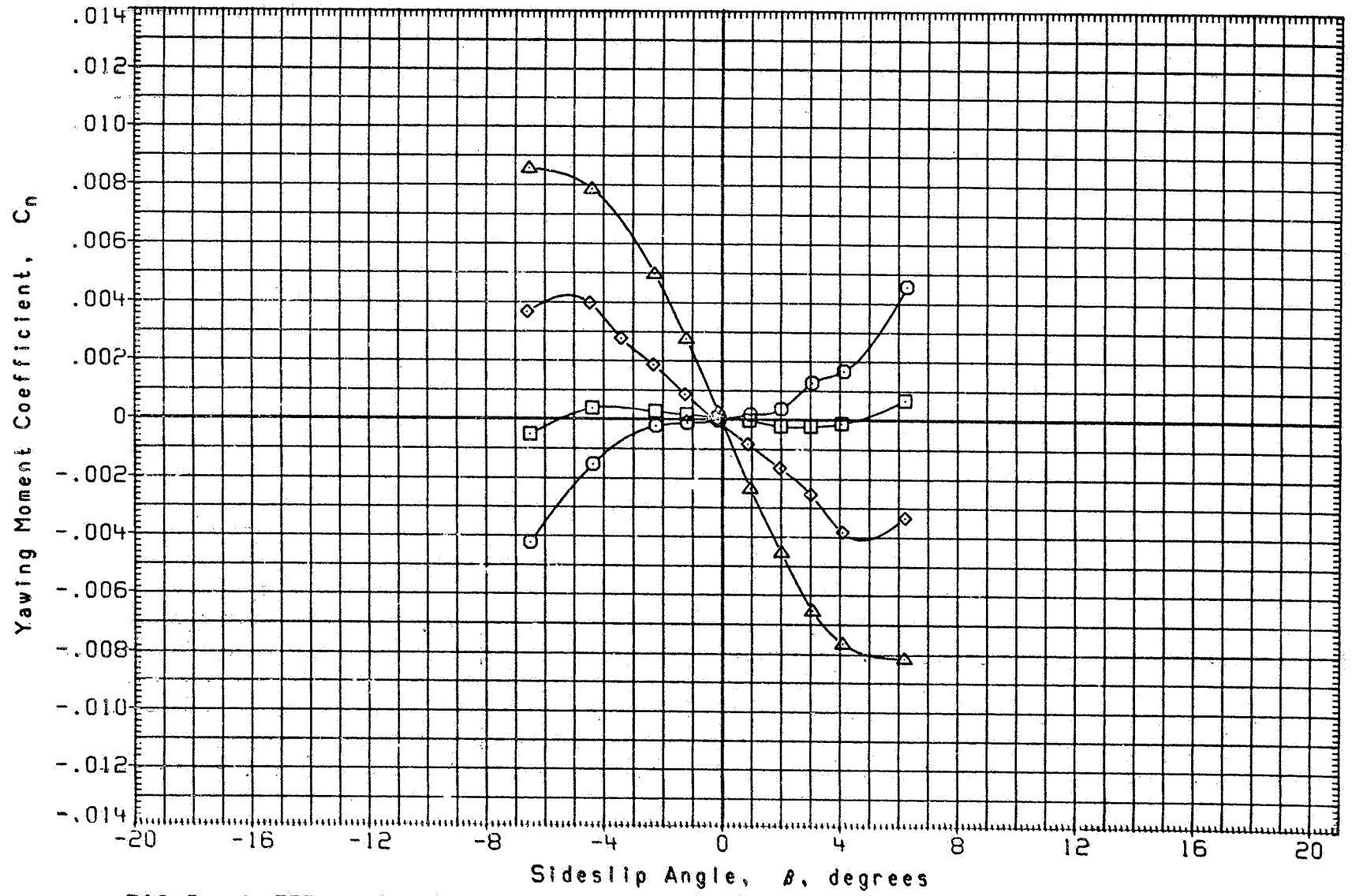


FIG.6 LATERAL-DIRECTIONAL STABILITY, SPEEDBRAKE=55 DEG

(A)MACH = 2.49

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H005	○	AMES 118-1-87 OA145C 01	5.000	.000	000	.000	55.000	.000	2.500
R2H006	□	AMES 118-1-87 OA145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H007	◇	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H010	△	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	55.000	.000	2.500

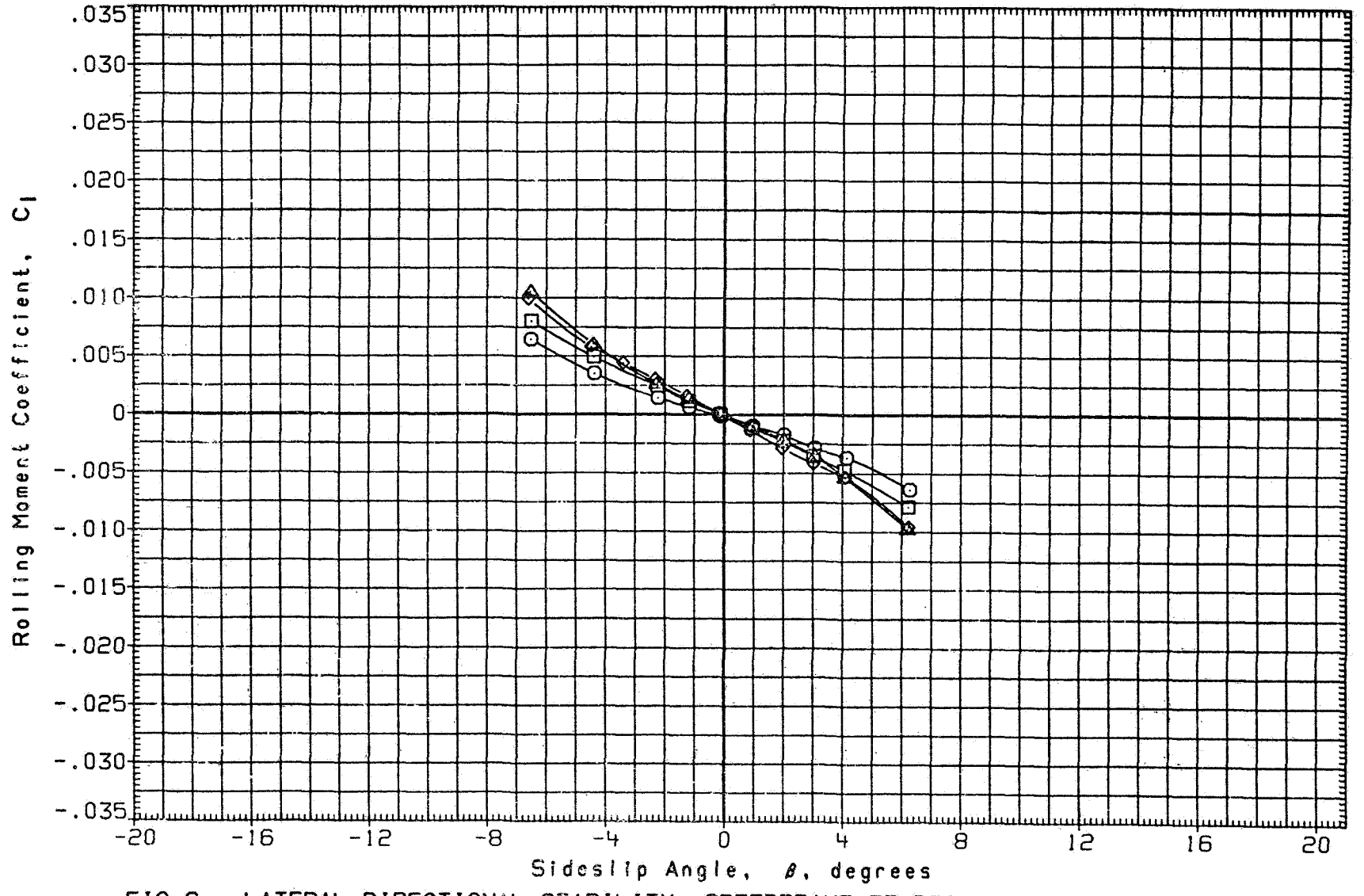


FIG.6 LATERAL-DIRECTIONAL STABILITY, SPEEDBRAKE=55 DEG

(A)MACH = 2.49

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H005	○	AMES 118-1-87 OA145C 01	5.000	.000	000	.000	55.000	.000	2.500
R2H006	□	AMES 118-1-87 OA145C 01	10.000	000	.000	.000	55.000	.000	2.500
R2H007	◇	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H010	△	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	55.000	.000	2.500

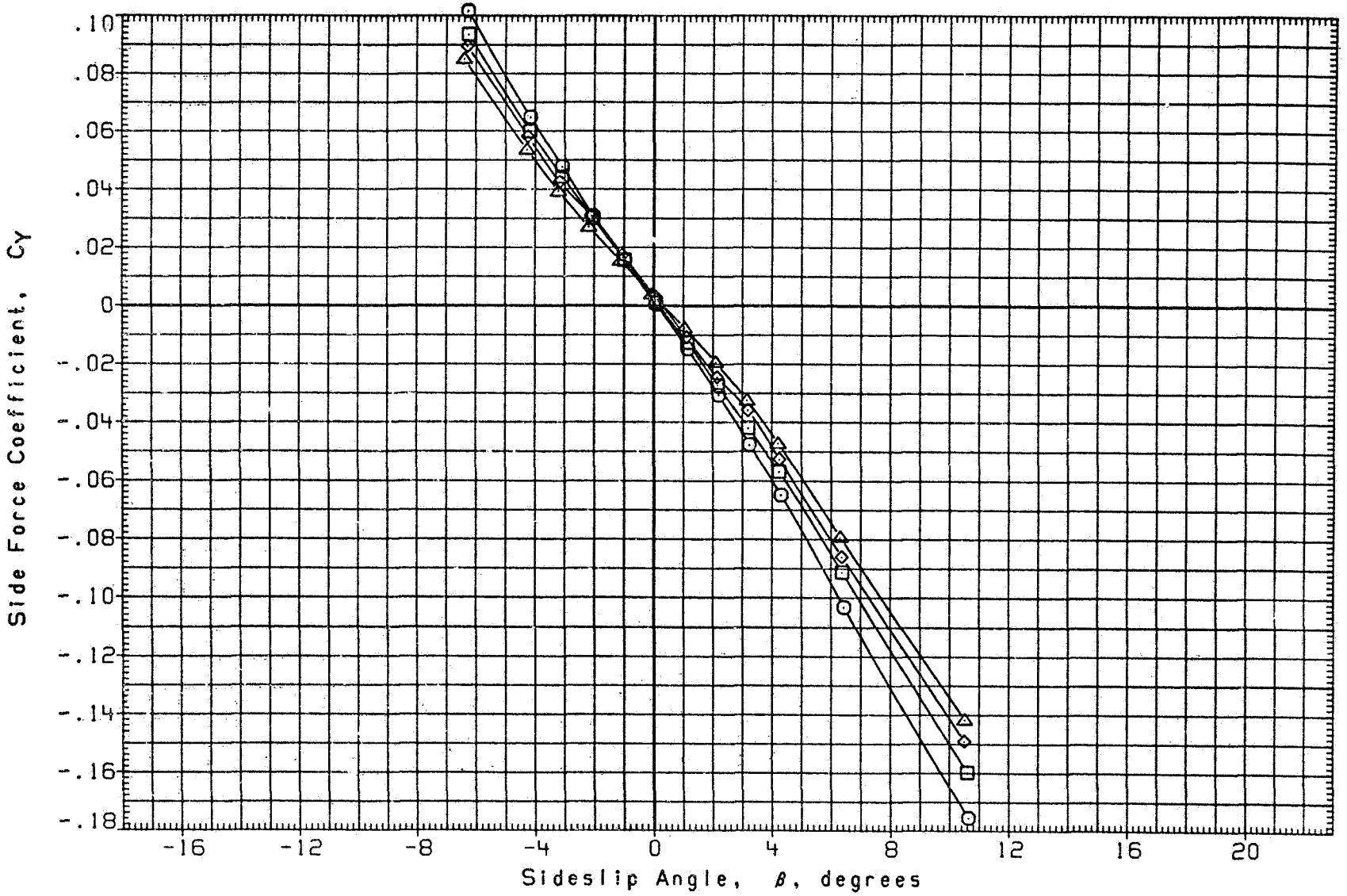


FIG.6 LATERAL-DIRECTIONAL STABILITY, SPEEDBRAKE=55 DEG

(B)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H005	○	AMES 118-1-87 0A145C 01	5.000	.000	.000	.000	55.000	.000	2.500
R2H006	□	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H007	◇	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H010	△	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	55.000	.000	2.500

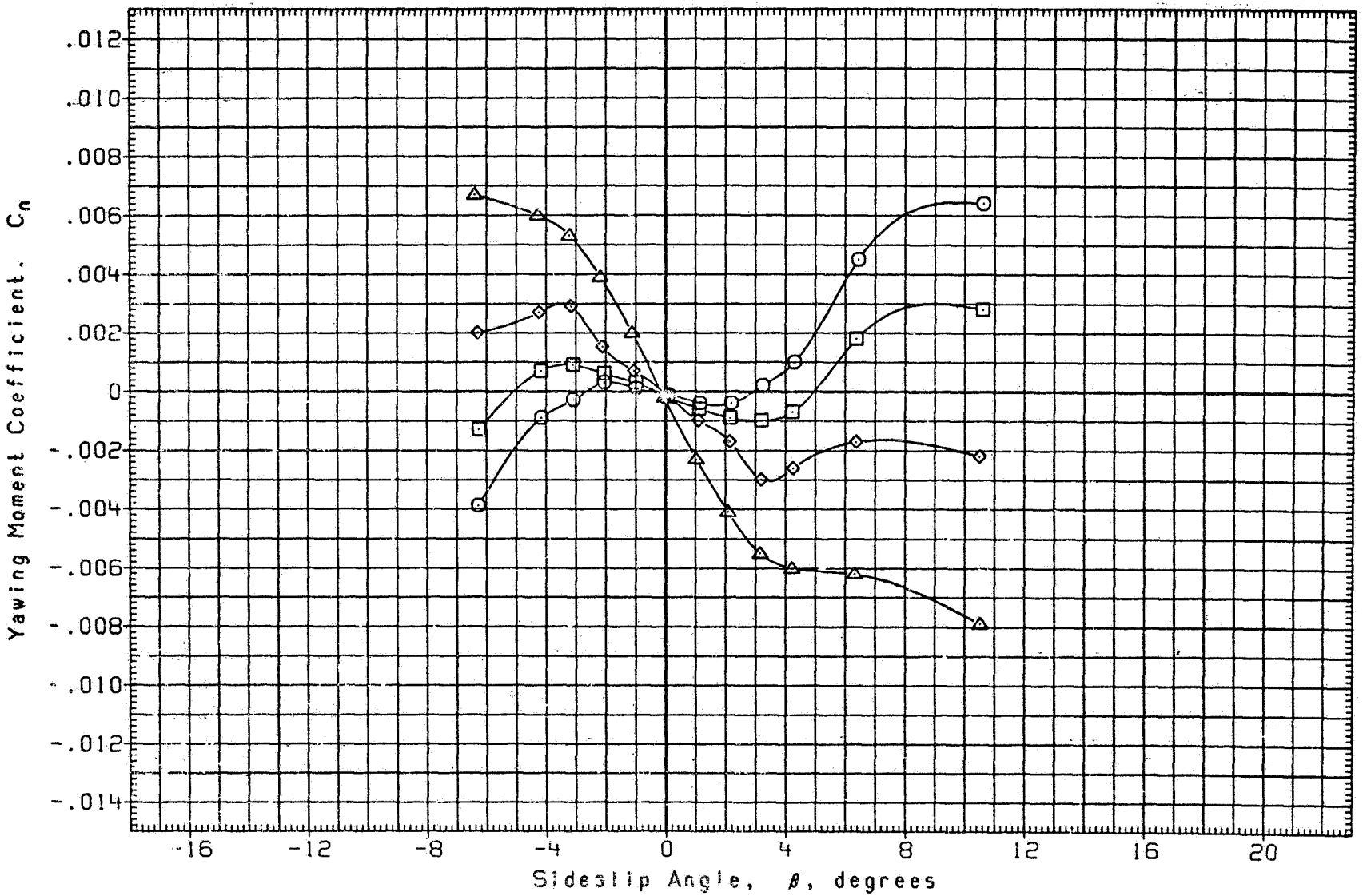


FIG.6 LATERAL-DIRECTIONAL STABILITY, SPEEDBRAKE=55 DEG

(B)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H005	○	AMES 118-1-87 OA145C 01	5.000	.000	.000	.000	55.000	.000	2.500
R2H006	□	AMES 118-1-87 OA145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H007	◇	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H010	△	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	55.000	.000	2.500

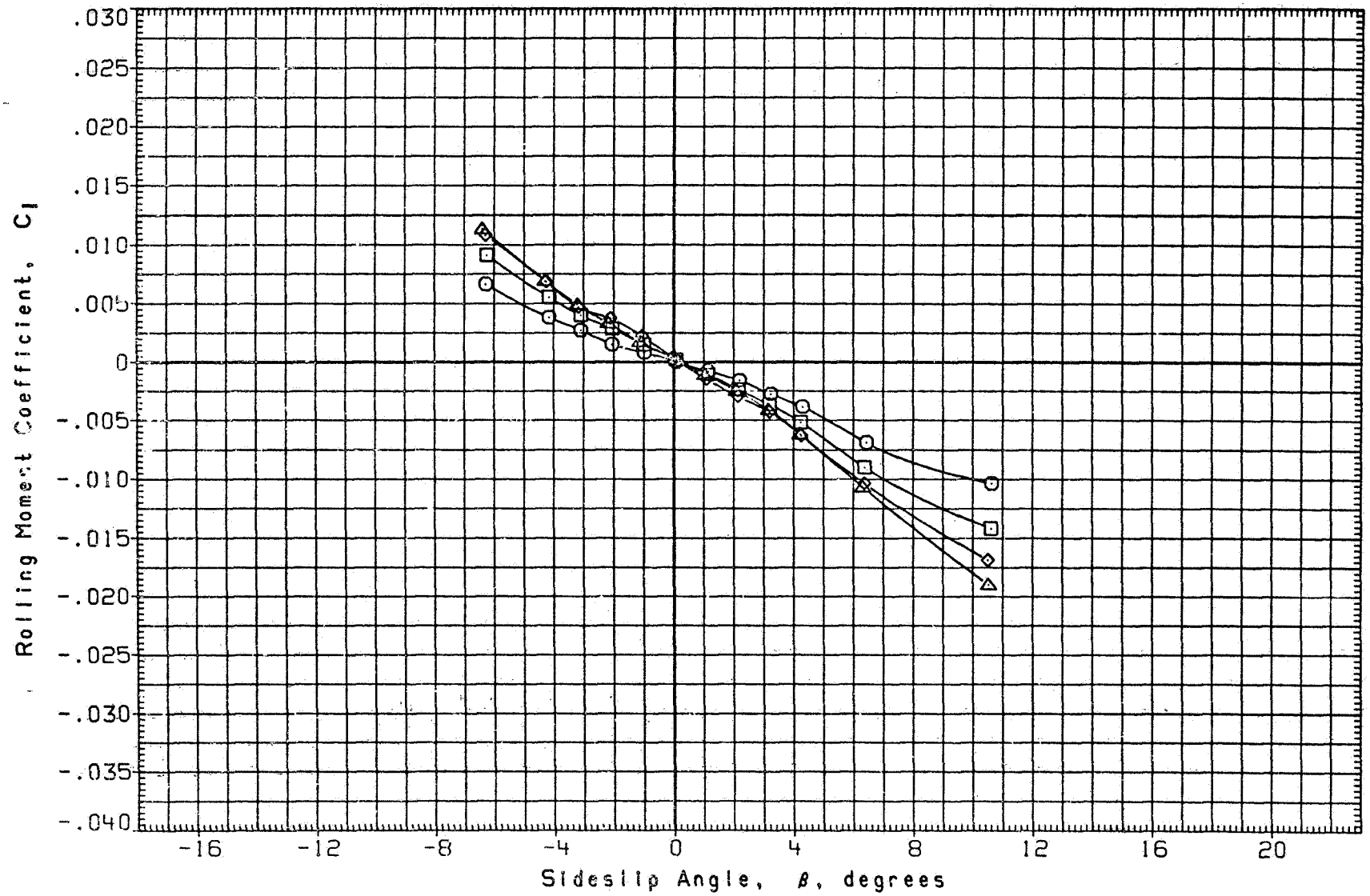


FIG.6 LATERAL-DIRECTIONAL STABILITY, SPEEDBRAKE=55 DEG

(B)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H005	○	AMES 118-1-87 0A145C 01	5.000	.000	.000	.000	55.000	.000	2.500
R2H006	□	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H007	◇	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H010	△	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	55.000	.000	2.500

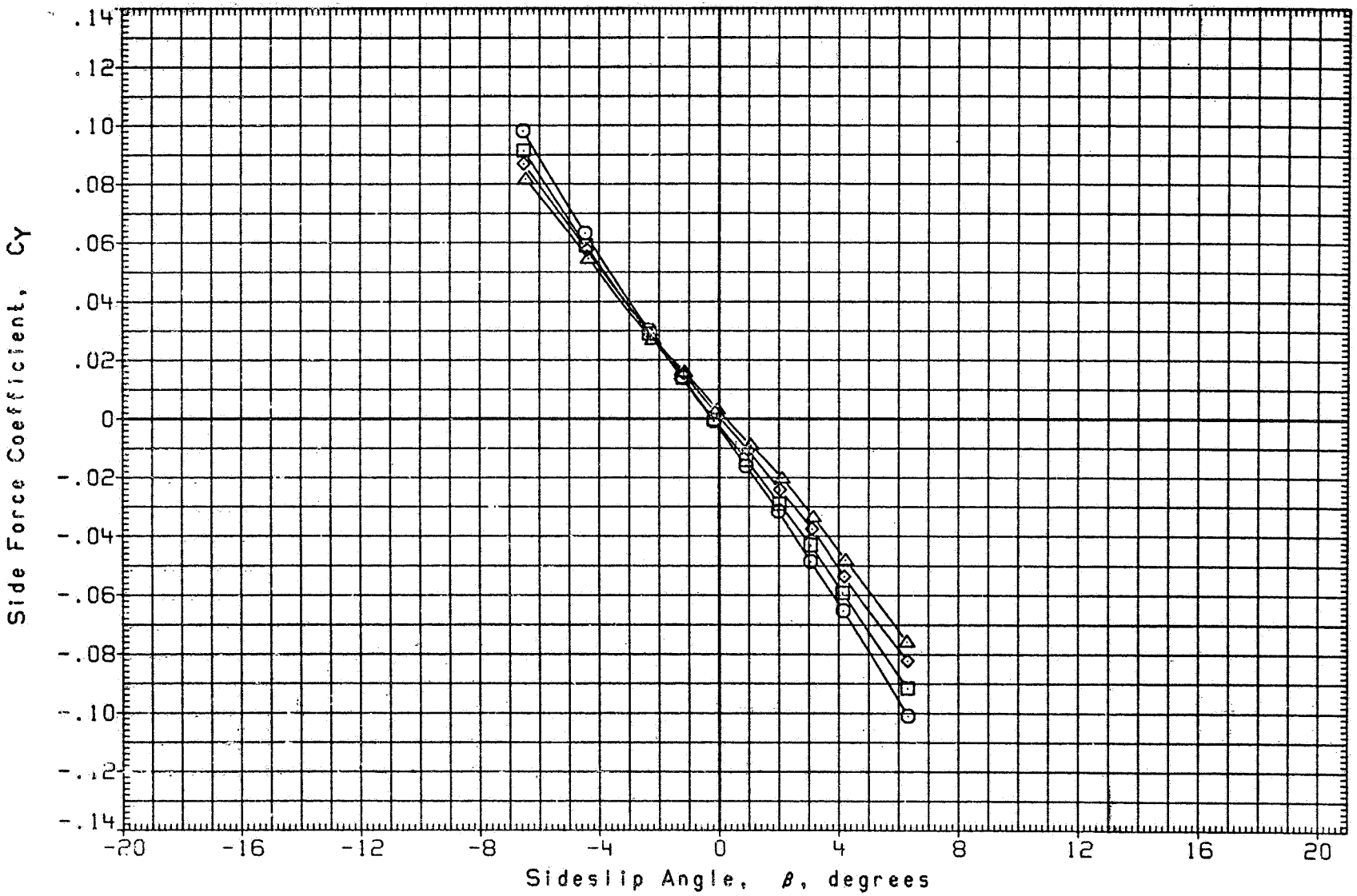


FIG.6 LATERAL-DIRECTIONAL STABILITY, SPEEDBRAKE=55 DEG

(C)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H005	○	AMES 118-1-87 OA145C 01	5.000	.000	.000	.000	55.000	.000	2.500
R2H006	□	AMES 118-1-87 OA145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H007	◇	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H010	△	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	55.000	.000	2.500

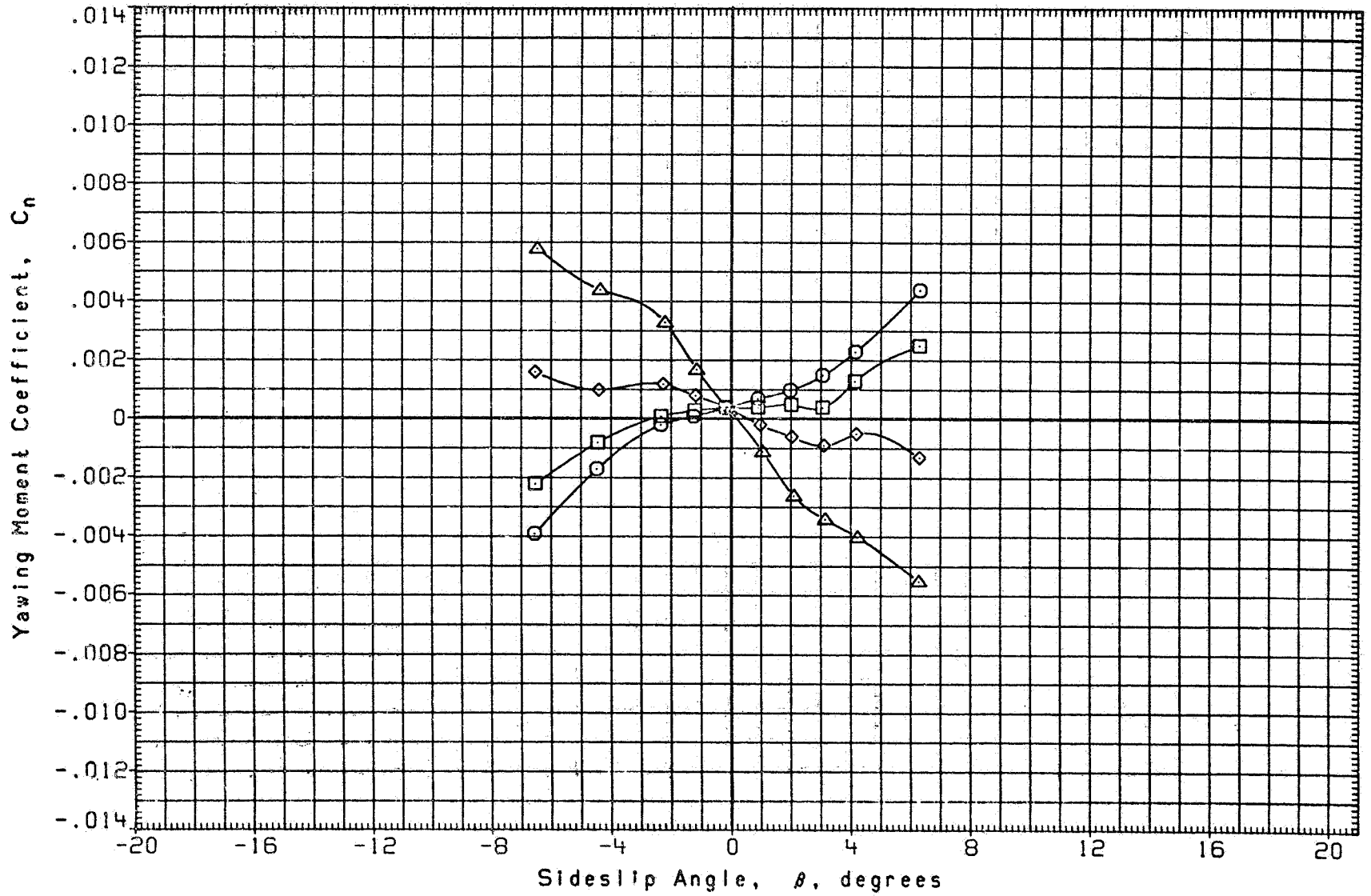


FIG.6 LATERAL-DIRECTIONAL STABILITY, SPEEDBRAKE=55 DEG

(C)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H005	○	AMES 118-1-87 0A145C 01	5.000	.000	.000	.000	55.000	.000	2.500
R2H006	□	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H007	◇	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H010	△	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	55.000	.000	2.500

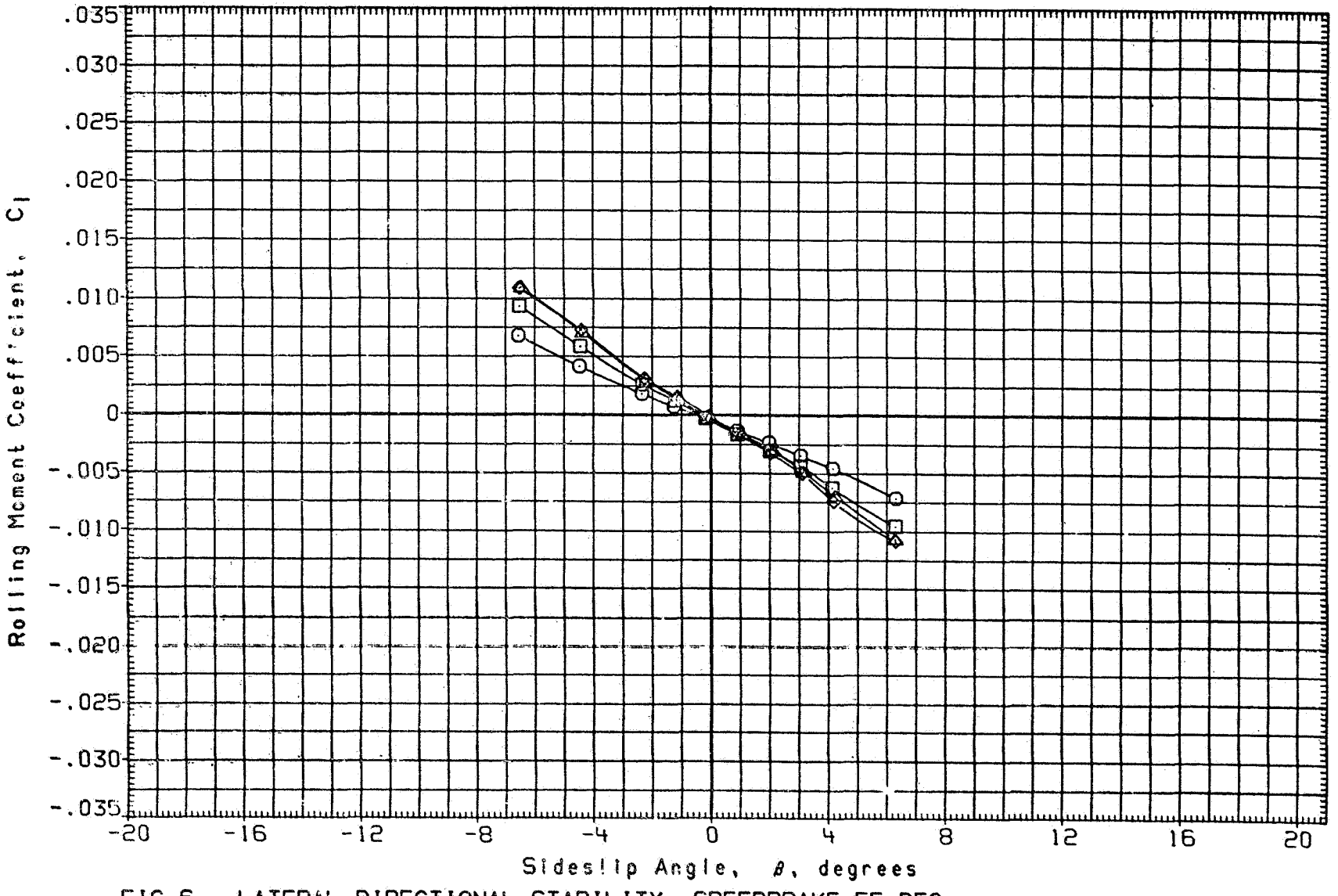


FIG.6 LATERAL-DIRECTIONAL STABILITY, SPEEDBRAKE=55 DEG

(C)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H007	○	AMES 118-1-87 0A145C 01	15.000	.000	000	.000	55.000	.000	2.500
R2H008	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	3.250
R2H009	◇	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	4.000

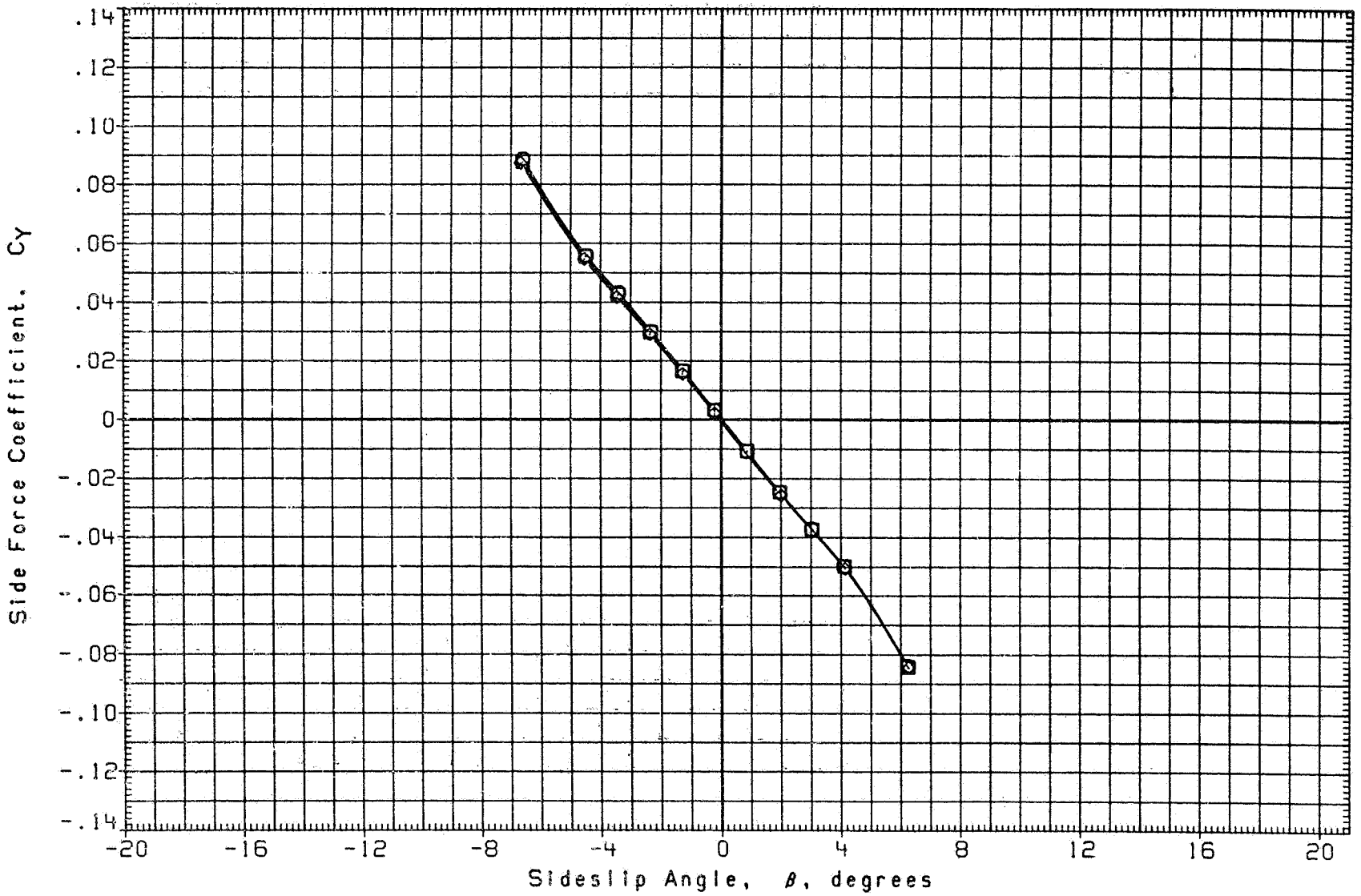


FIG.7 REYNOLDS NUMBER EFFECT ON LATERAL-DIRECTIONAL DATA

(A) MACH = 2.50

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H007	○	AMES 118-1-87 0A145C 01	15.000	.000	000	.000	55.000	.000	2.500
R2H008	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	3.250
R2H009	◇	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	4.000

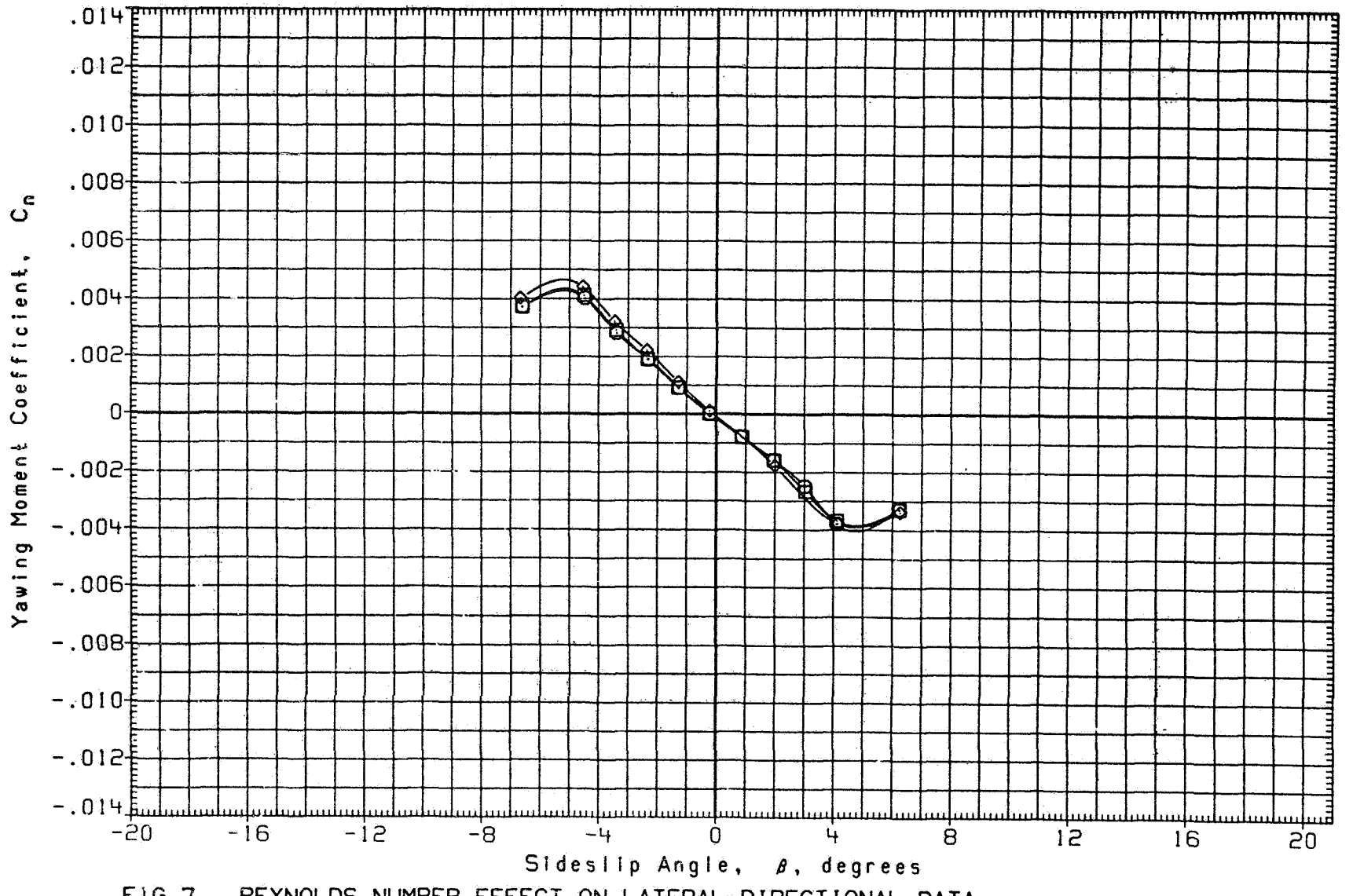


FIG.7 REYNOLDS NUMBER EFFECT ON LATERAL-DIRECTIONAL DATA

(A)MACH = 2.50

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H007	○	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H008	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	3.250
R2H009	◇	AMES 118-1-87 0A145C 01	15.000	.000	.000	000	55.000	.000	4.000

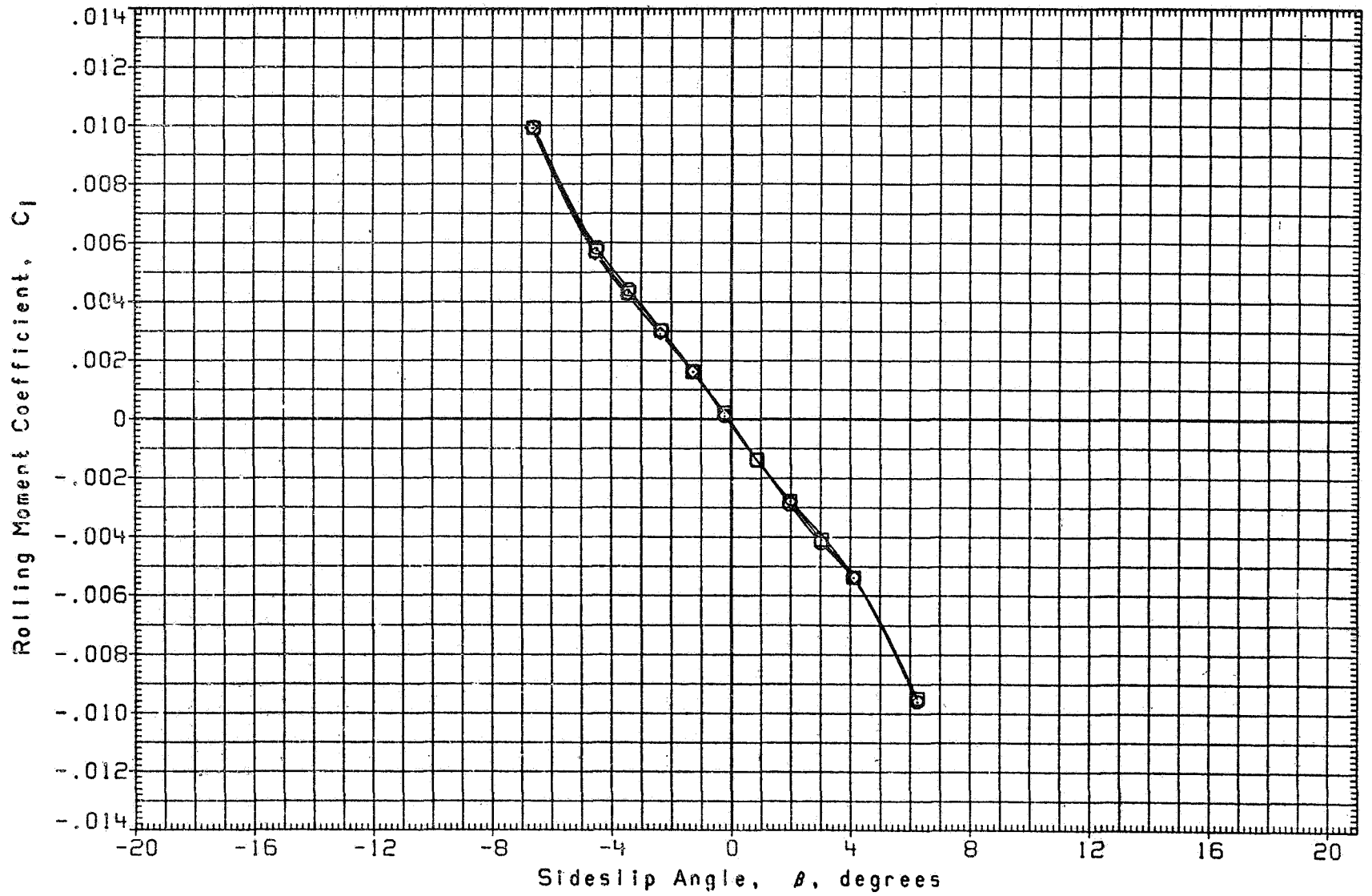


FIG.7 REYNOLDS NUMBER EFFECT ON LATERAL-DIRECTIONAL DATA

(A)MACH = 2.50

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H018	○	AMES 118-1-87 OA145C 01	.000	-35.000	.000	.000	55.000	.000	2.500
R2H017	□	AMES 118-1-87 OA145C 01	.000	-20.000	.000	.000	55.000	.000	2.500
R2H016	◇	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
R2H015	△	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	▷	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H012	D	AMES 118-1-87 OA145C 01	.000	5.000	000	.000	55.000	.000	2.500

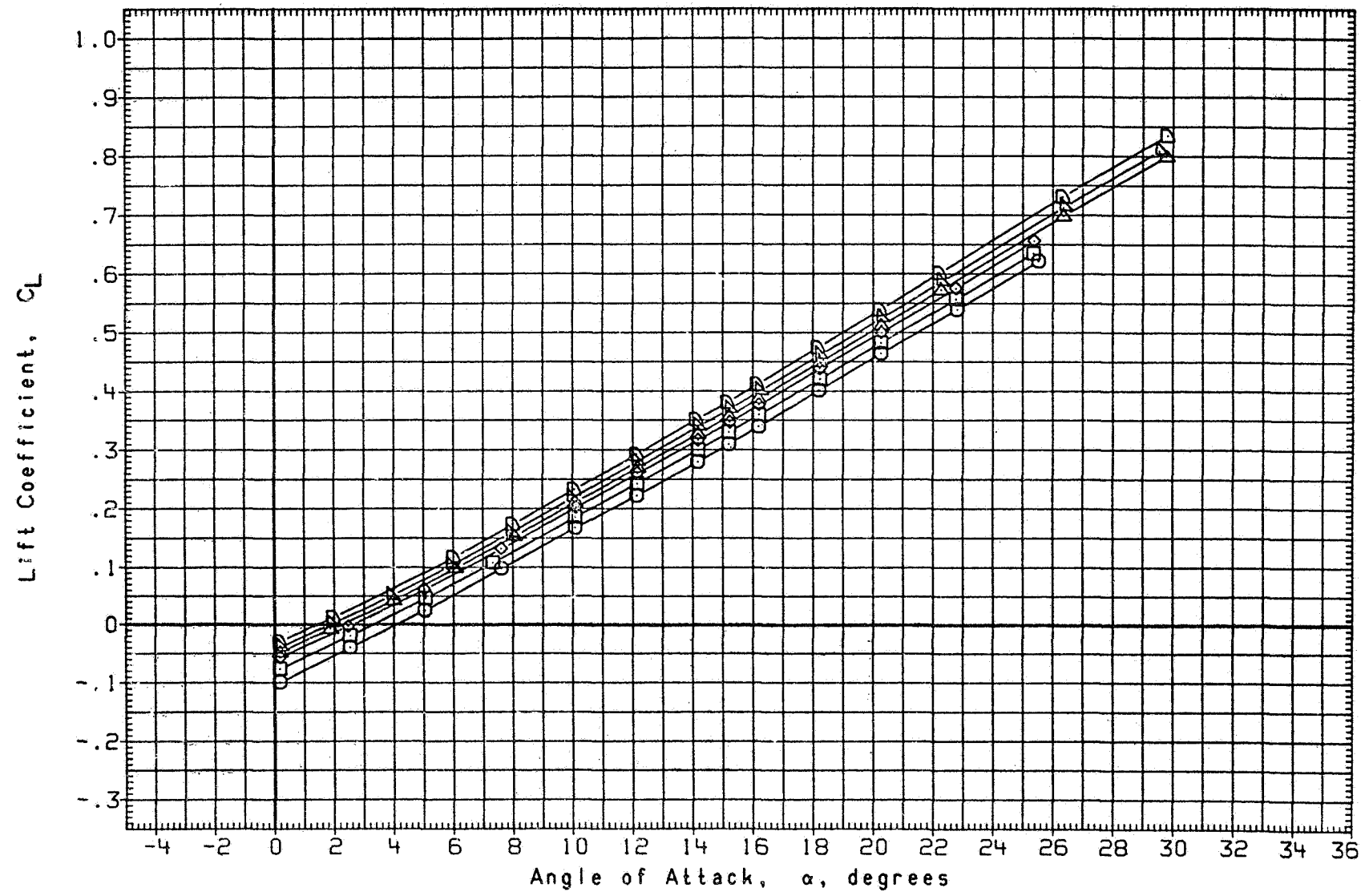


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H018	○	AMES 118-1-87 0A145C 01	.000	-35.000	.000	.000	55.000	.000	2.500
R2H017	□	AMES 118-1-87 0A145C 01	.000	-20.000	.000	.000	55.000	.000	2.500
R2H016	◇	AMES 118-1-87 0A145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
R2H015	△	AMES 118-1-87 0A145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	◁	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H012	▷	AMES 118-1-87 0A145C 01	.000	5.000	.000	.000	55.000	.000	2.500

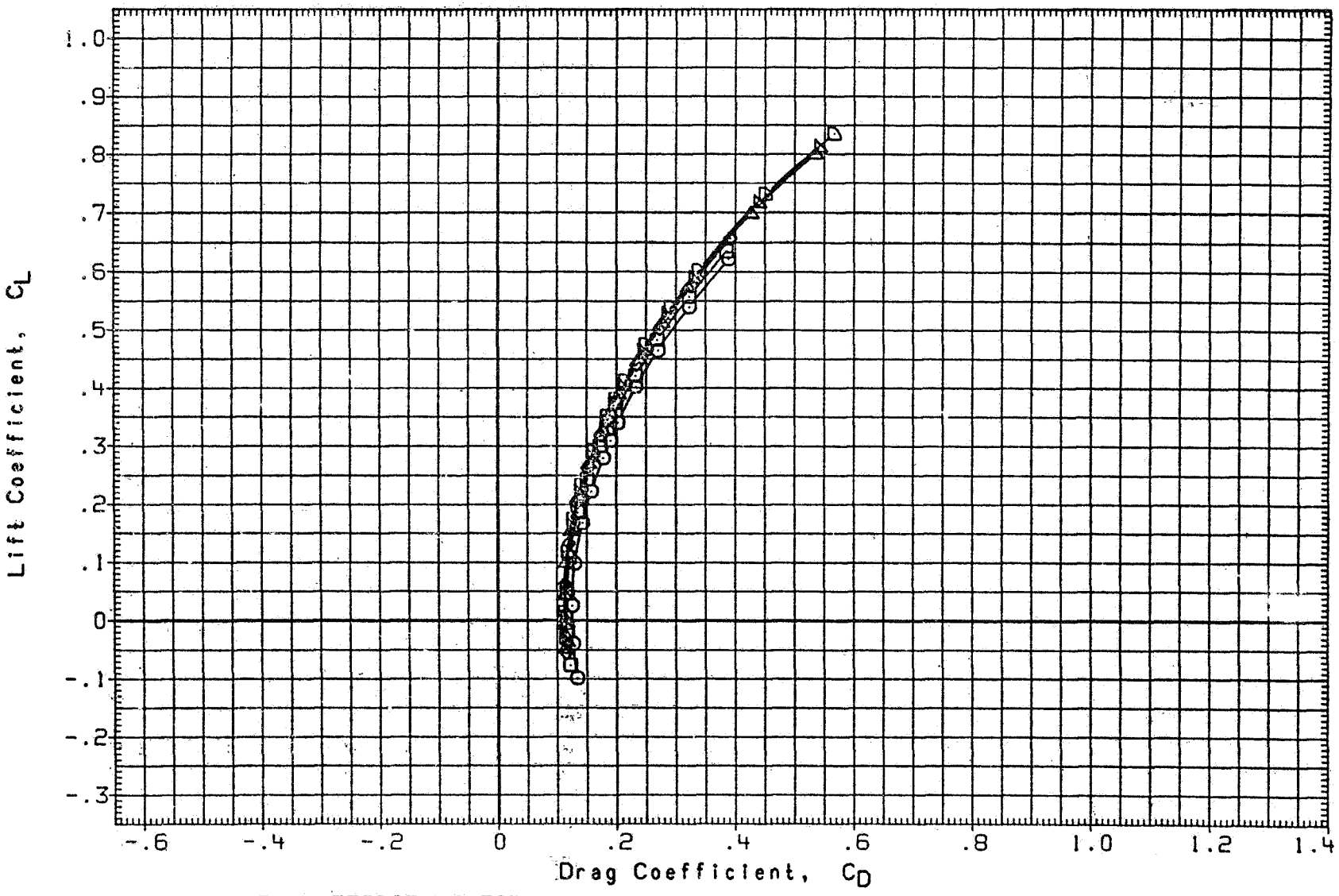


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H018	○	AMES 118-1-87 OA145C 01	.000	-35.000	.000	.000	55.000	.000	2.500
R2H017	□	AMES 118-1-87 OA145C 01	.000	-20 000	.000	.000	55.000	.000	2.500
R2H016	◇	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
R2H015	△	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	▷	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H012	▷	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55.000	.000	2.500

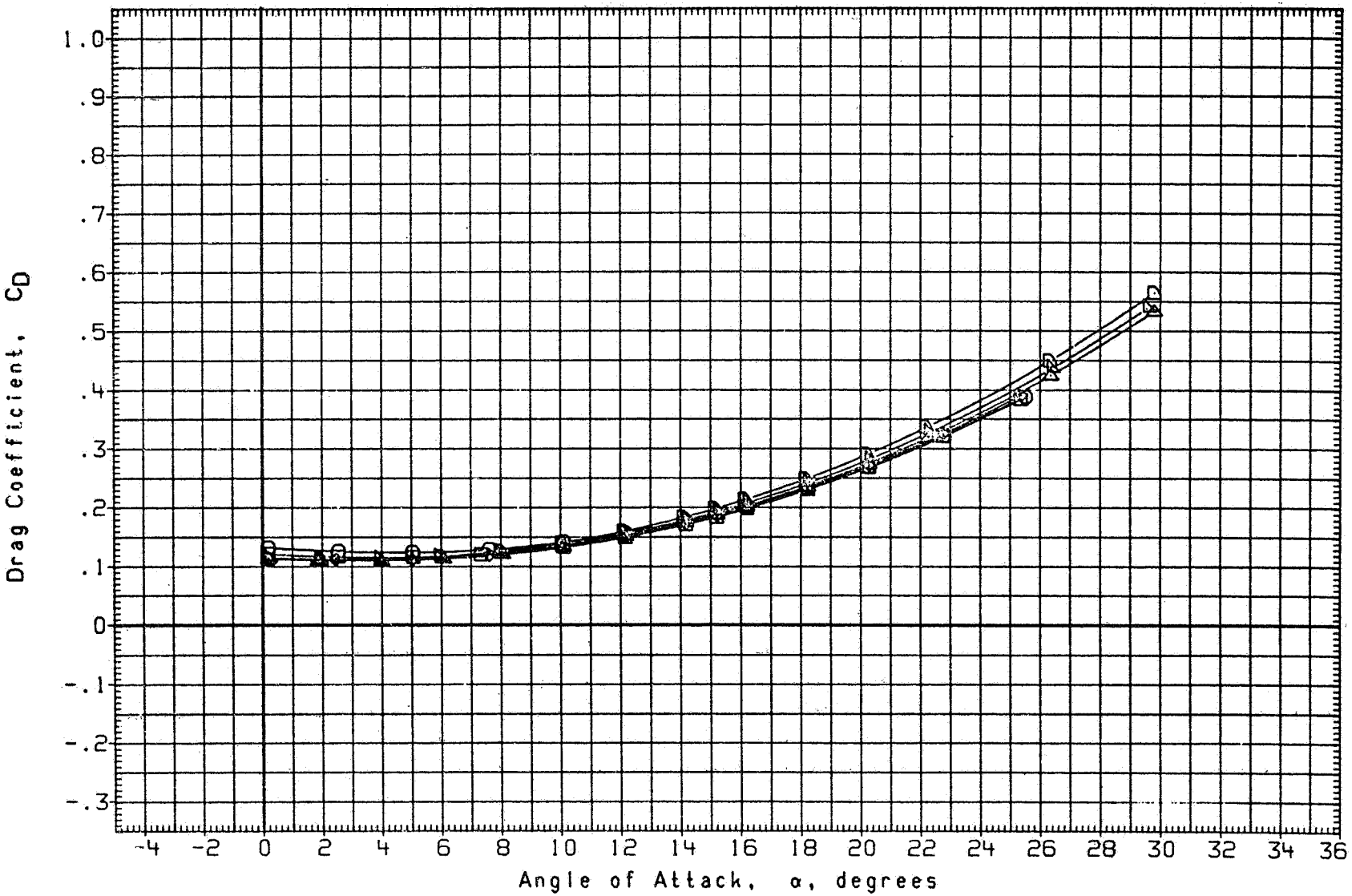


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H018	○	AMES 118-1-87 OA145C 01	.000	-35.000	.000	.000	55.000	.000	2.500
R2H017	□	AMES 118-1-87 OA145C 01	.000	-20.000	.000	.000	55.000	.000	2.500
R2H016	◇	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
R2H015	△	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	▽	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H012	▷	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55.000	.000	2.500

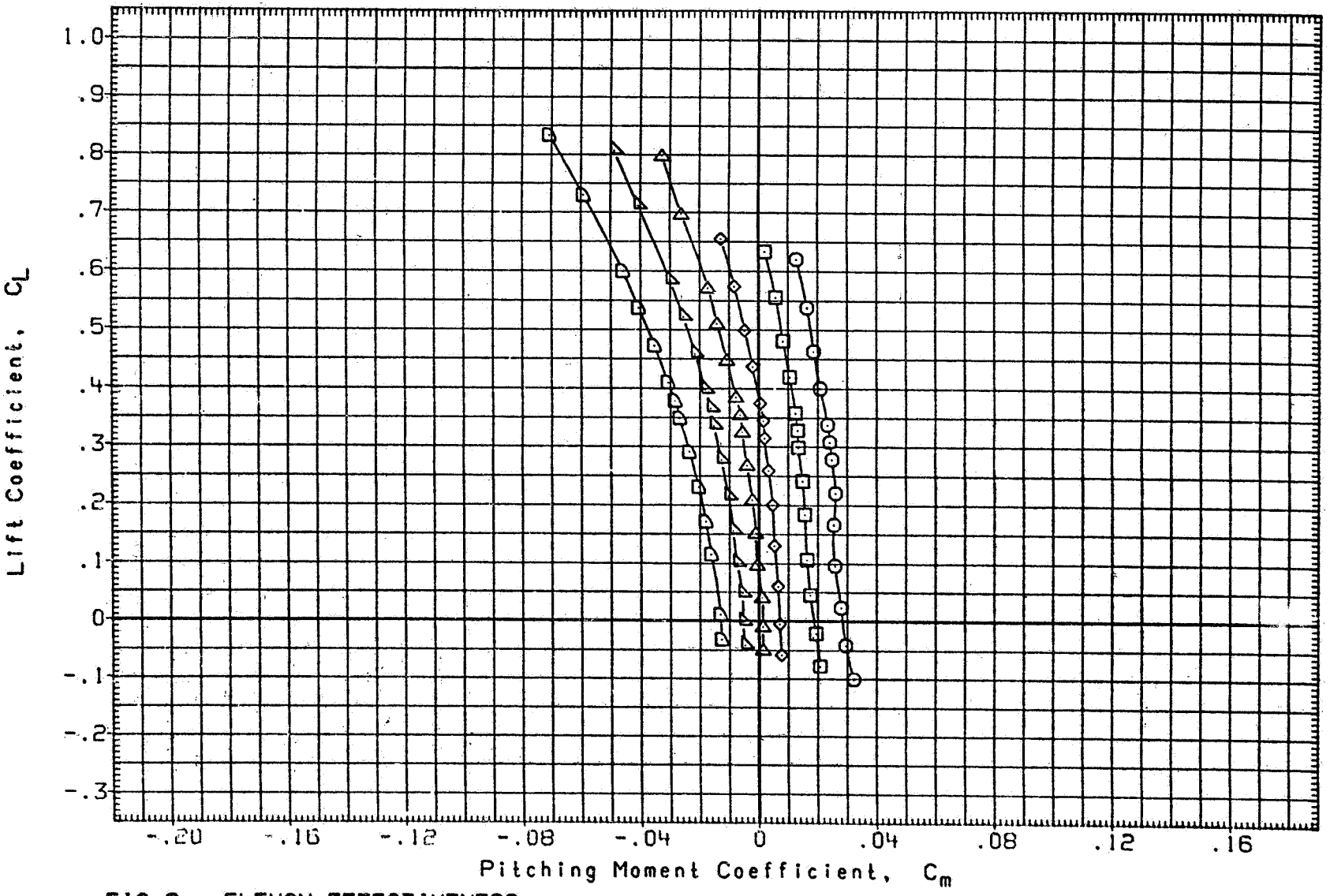


FIG.8 ELEVON EFFECTIVENESS

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H018	○	AMES 118-1-87 0A145C 01	.000	-35.000	.000	000	55.000	.000	2.500
R2H017	□	AMES 118-1-87 0A145C 01	.000	-20 000	.000	.000	55.000	.000	2.500
R2H016	◇	AMES 118-1-87 0A145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
R2H015	△	AMES 118-1-87 0A145C 01	000	-5.000	.000	000	55.000	.000	2.500
R2H002	◁	AMES 118-1-87 0A145C 01	.000	.000	000	000	55.000	.000	2.500
R2H012	▷	AMES 118-1-87 0A145C 01	000	5.000	.000	.000	55 000	.000	2.500

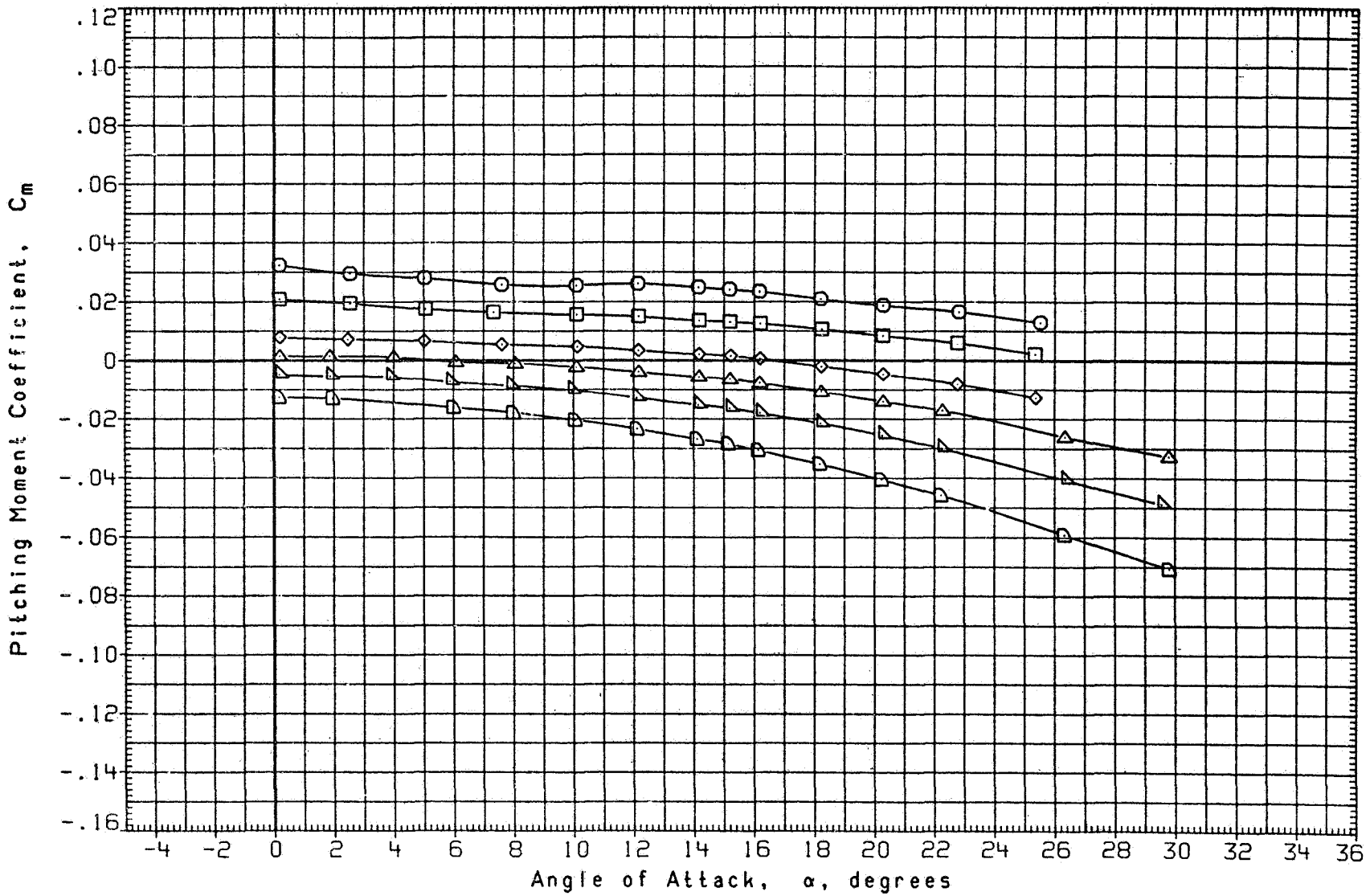


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H018	○	AMES 118-1-87 0A145C 01	.000	-35.000	.000	000	55.000	.000	2.500
R2H017	□	AMES 118-1-87 0A145C 01	.000	-20.000	.000	000	55.000	.000	2.500
R2H016	◇	AMES 118-1-87 0A145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
R2H015	△	AMES 118-1-87 0A145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	▷	AMES 118-1-87 0A145C 01	.000	000	.000	.000	55 000	.000	2.500
R2H012	D	AMES 118-1-87 0A145C 01	.000	5.000	.000	.000	55 000	.000	2.500

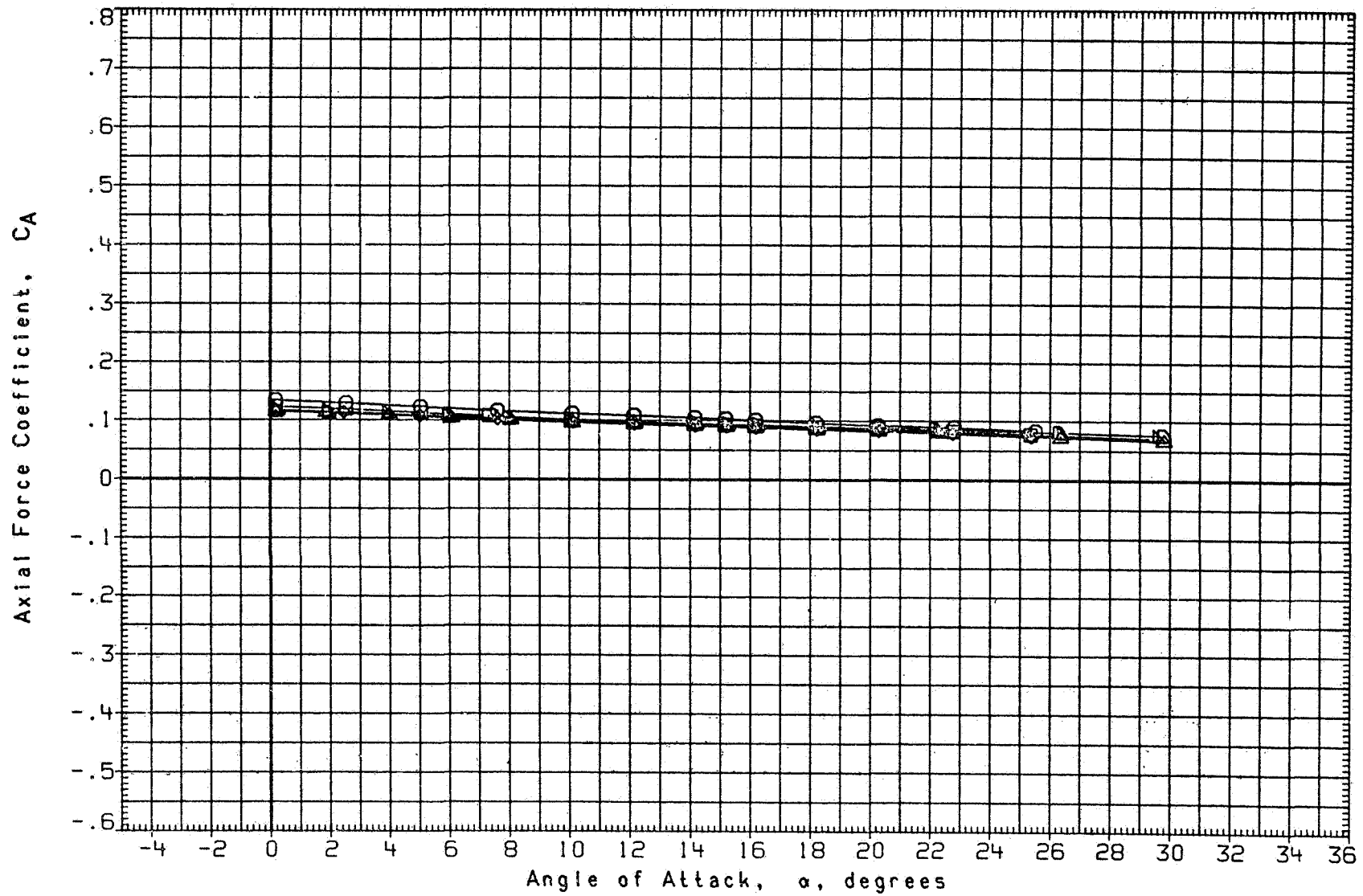


FIG.8 ELEVON EFFECTIVENESS

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H018	○	AMES 118-1-87 0A145C 01	.000	-35.000	.000	.000	55.000	.000	2.500
G2H017	□	AMES 118-1-87 0A145C 01	.000	-20.000	.000	.000	55.000	.000	2.500
G2H016	◇	AMES 118-1-87 0A145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
G2H015	△	AMES 118-1-87 0A145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
G2H002	◁	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
G2H012	D	AMES 118-1-87 0A145C 01	.000	5.000	.000	.000	55.000	.000	2.500

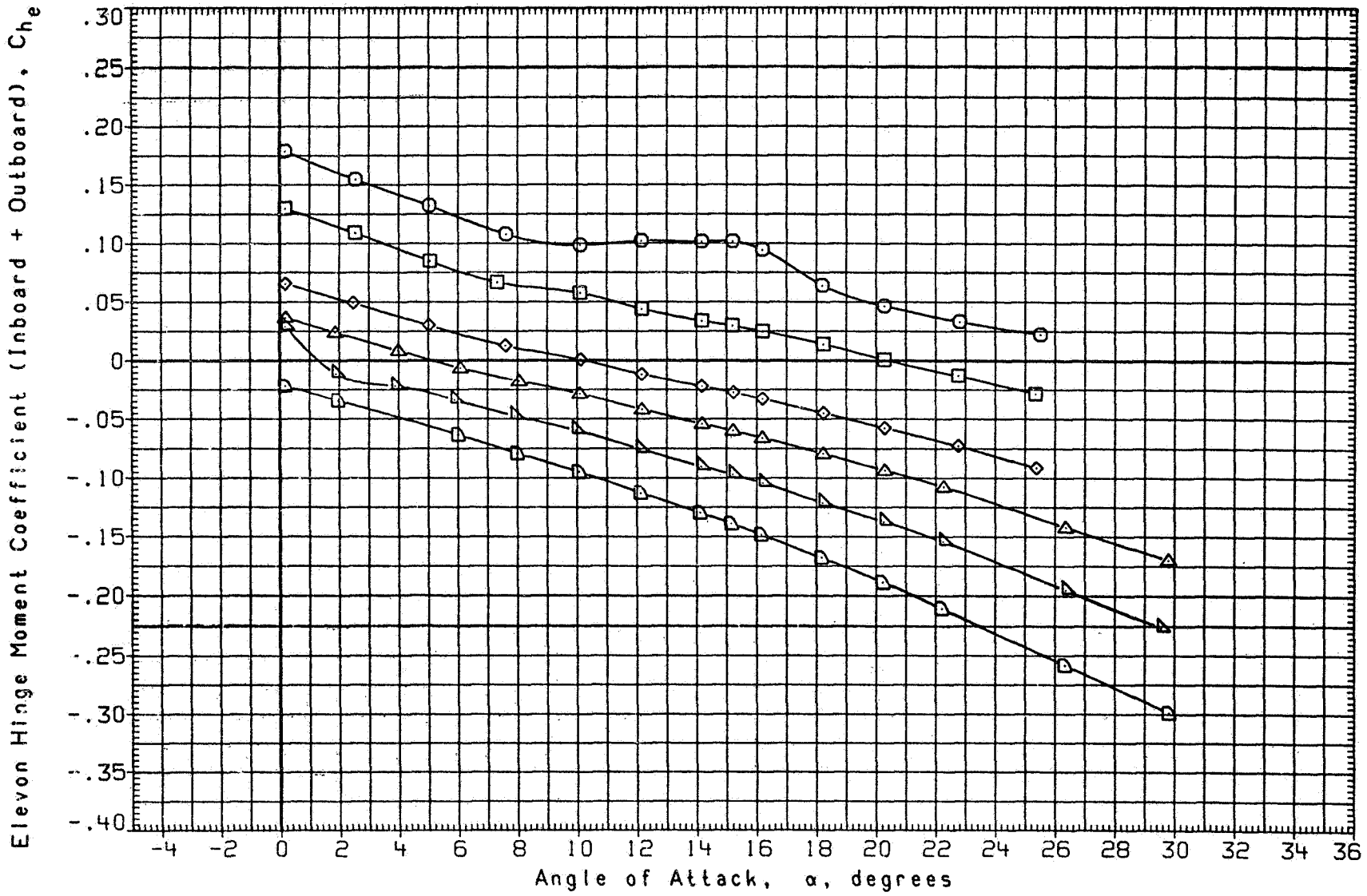


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H018	○	AMES 118-1-87 OA145C 01	.000	-35.000	000	.000	55.000	.000	2.500
G2H017	□	AMES 118-1-87 OA145C 01	.000	-20.000	.000	.000	55.000	.000	2.500
G2H016	◇	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
G2H015	△	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
G2H002	◸	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
G2H012	▱	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55 000	.000	2.500

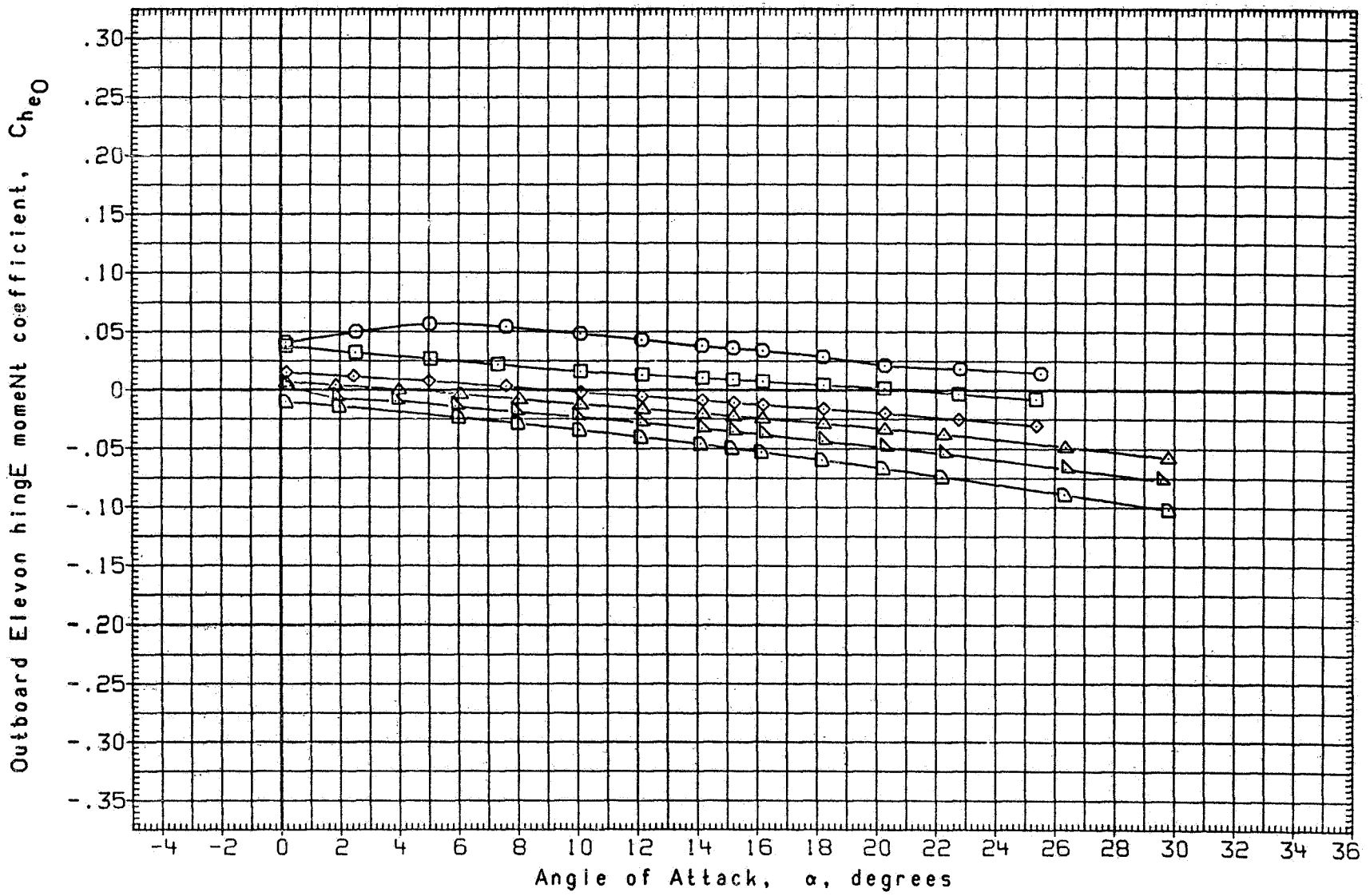


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H018	○	AMES 118-1-87 0A145C 01	.000	-35.000	.000	.000	55.000	.000	2.500
G2H017	□	AMES 118-1-87 0A145C 01	.000	-20.000	.000	.000	55.000	.000	2.500
G2H016	◇	AMES 118-1-87 0A145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
G2H015	△	AMES 118-1-87 0A145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
G2H002	◁	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
G2H012	▷	AMES 118-1-87 0A145C 01	.000	5.000	.000	.000	55.000	.000	2.500

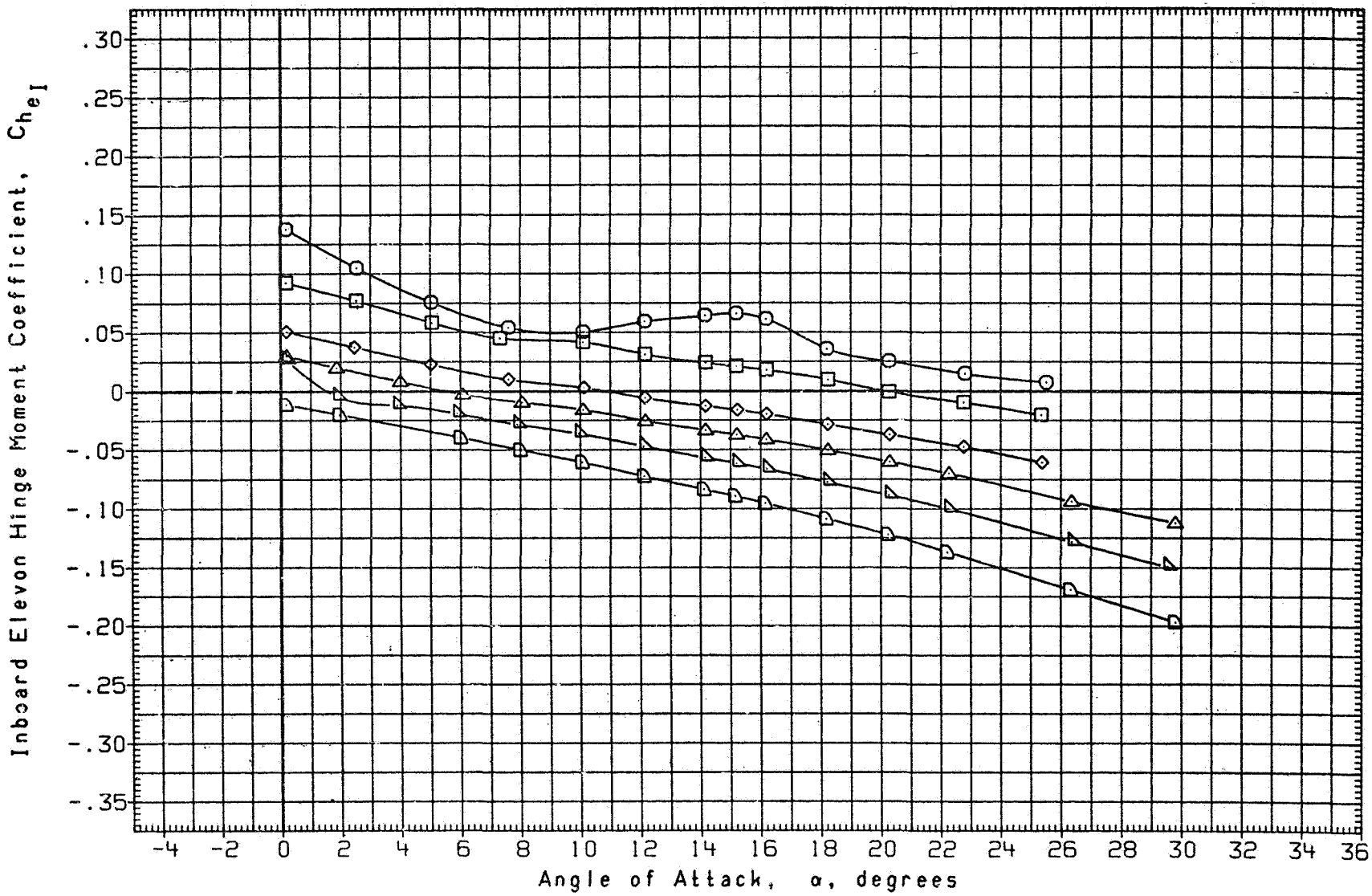


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H018	○	AMES 118-1-87 OA145C 01	.000	-35.000	.000	.000	55.000	.000	2.500
G2H017	□	AMES 118-1-87 OA145C 01	.000	-20.000	.000	.000	55.000	.000	2.500
G2H016	◇	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
G2H015	△	AMES 118-1-87 OA145C 01	.000	-5.000	000	.000	55.000	.000	2.500
G2H002	▷	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
G2H012	D	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55.000	.000	2.500

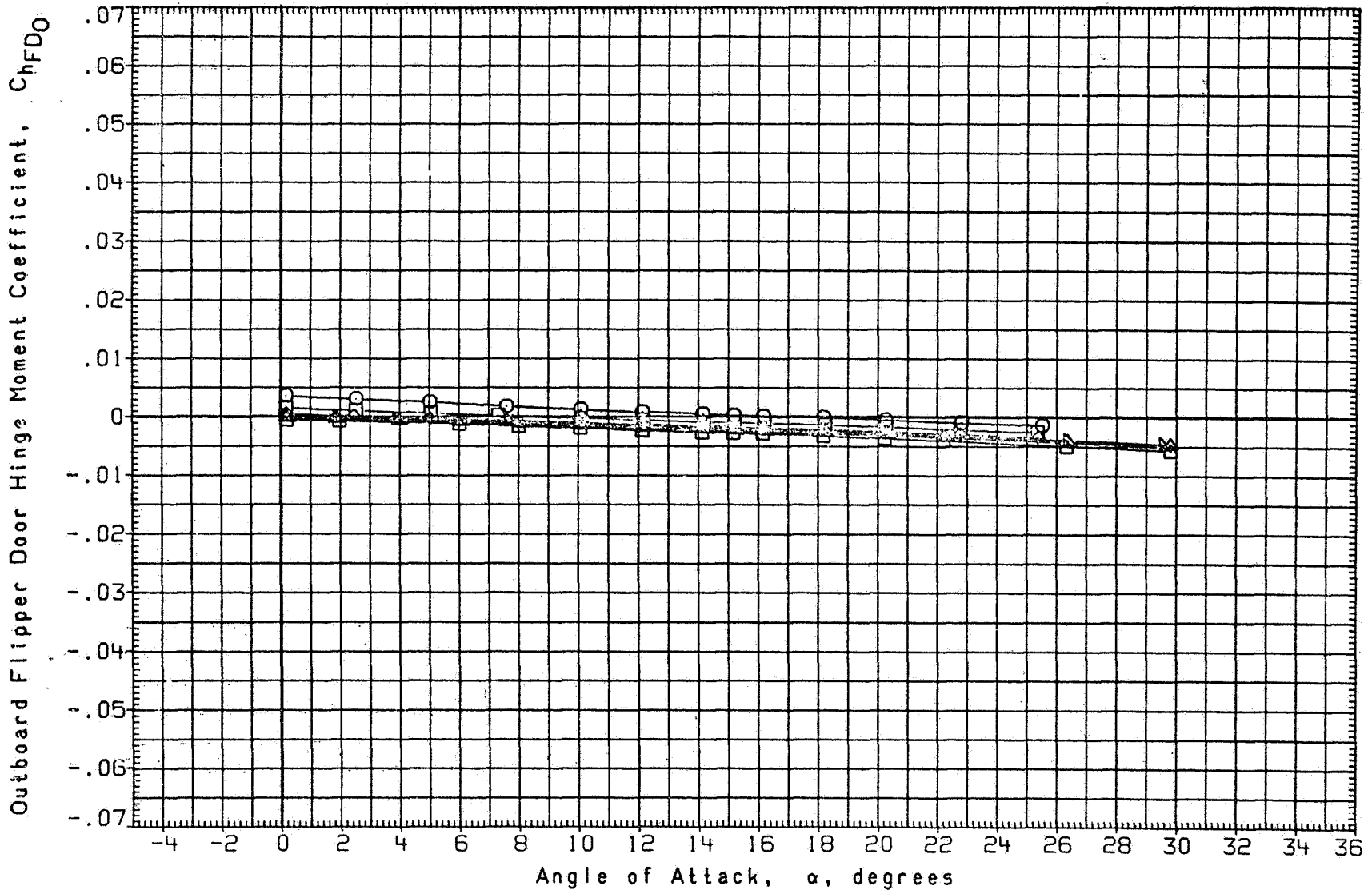


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H018	○	AMES 118-1-87 OA145C 01	.000	-35.000	.000	.000	55.000	.000	2.500
G2H017	□	AMES 118-1-87 OA145C 01	.000	-20.000	.000	.000	55.000	.000	2.500
G2H016	◇	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
G2H015	△	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
G2H002	▽	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
G2H012	D	AMES 118-1-87 OA145C 01	000	5.000	.000	.000	55.000	.000	2.500

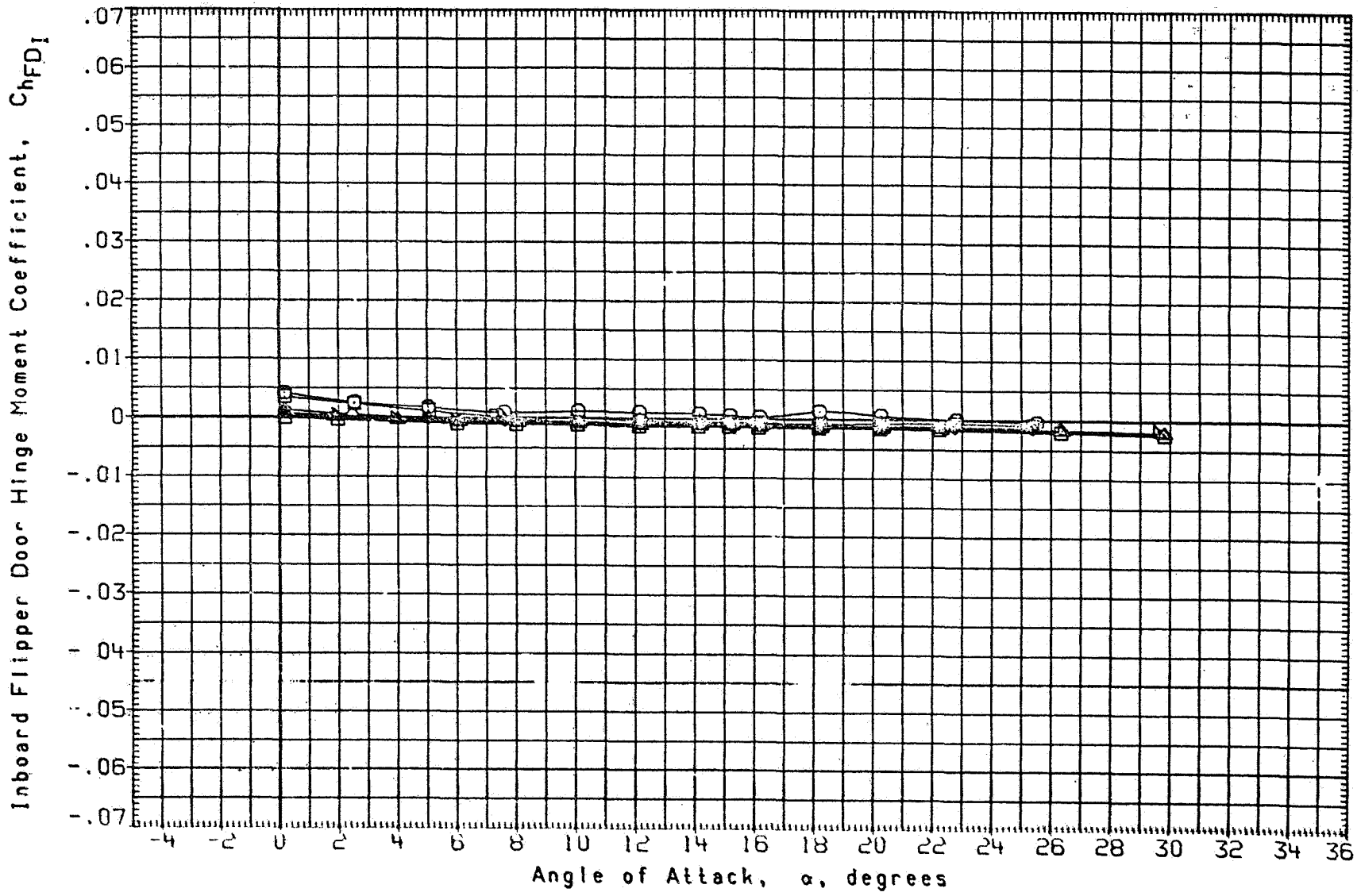


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H016	○	AMES 118-1-87 0A145C 01	.000	-10.000	000	000	55.000	.000	2.500
R2H015	□	AMES 118-1-87 0A145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H012	△	AMES 118-1-87 0A145C 01	.000	5.000	.000	.000	55 000	.000	2.500
R2H013	◁	AMES 118-1-87 0A145C 01	.000	10.000	000	000	55 000	.000	2.500
R2H014	▷	AMES 118-1-87 0A145C 01	.000	20.000	.000	000	55 000	.000	2.500

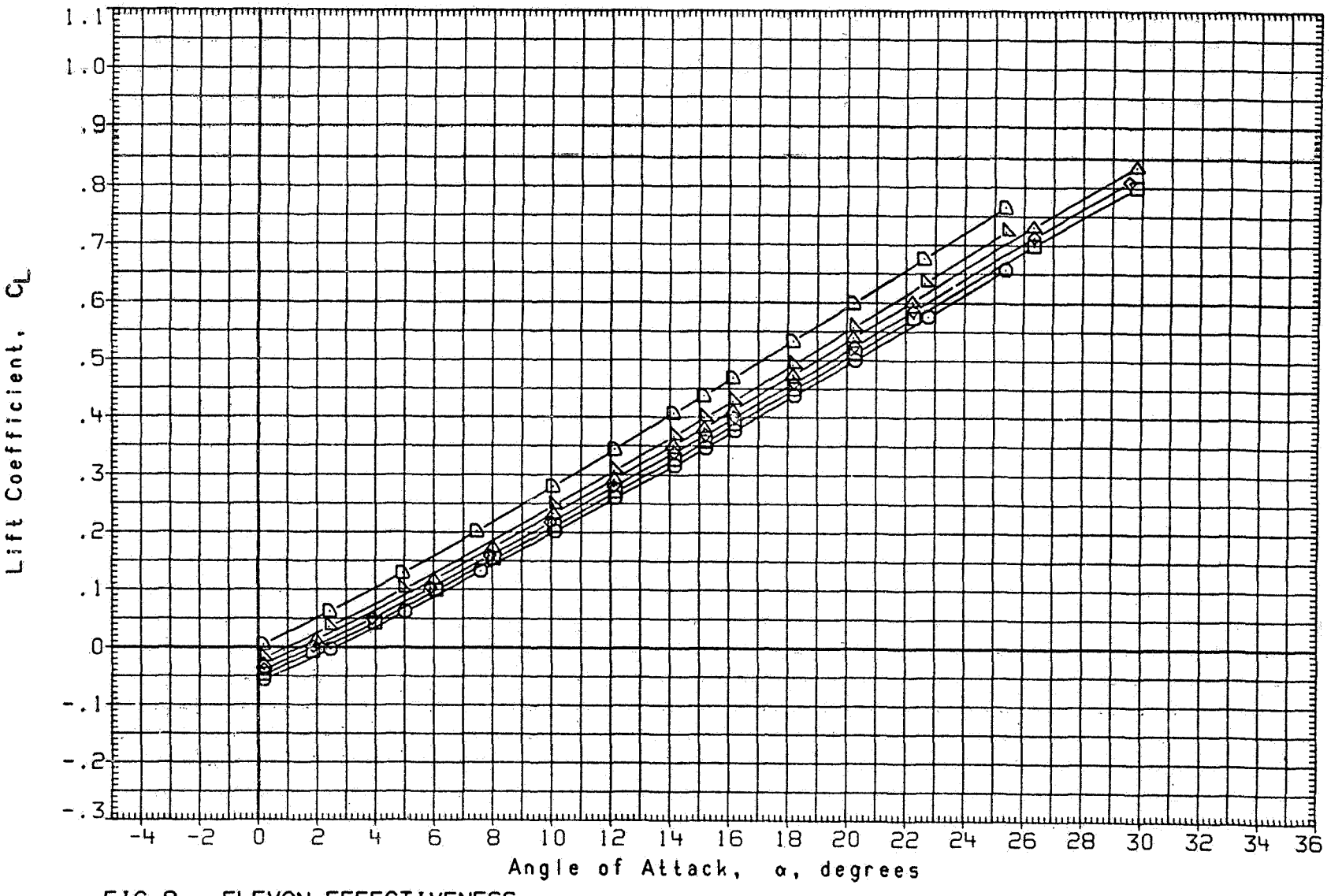


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H016	○	AMES 118-1-87 OA145C 01	.000	-10.000	000	.000	55.000	.000	2.500
R2H015	□	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	◇	AMES 118-1-87 OA145C 01	.000	.000	000	.000	55.000	.000	2.500
R2H012	△	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55.000	.000	2.500
R2H013	▽	AMES 118-1-87 OA145C 01	.000	10.000	.000	.000	55.000	.000	2.500
R2H014	▷	AMES 118-1-87 OA145C 01	.000	20.000	.000	.000	55.000	.000	2.500

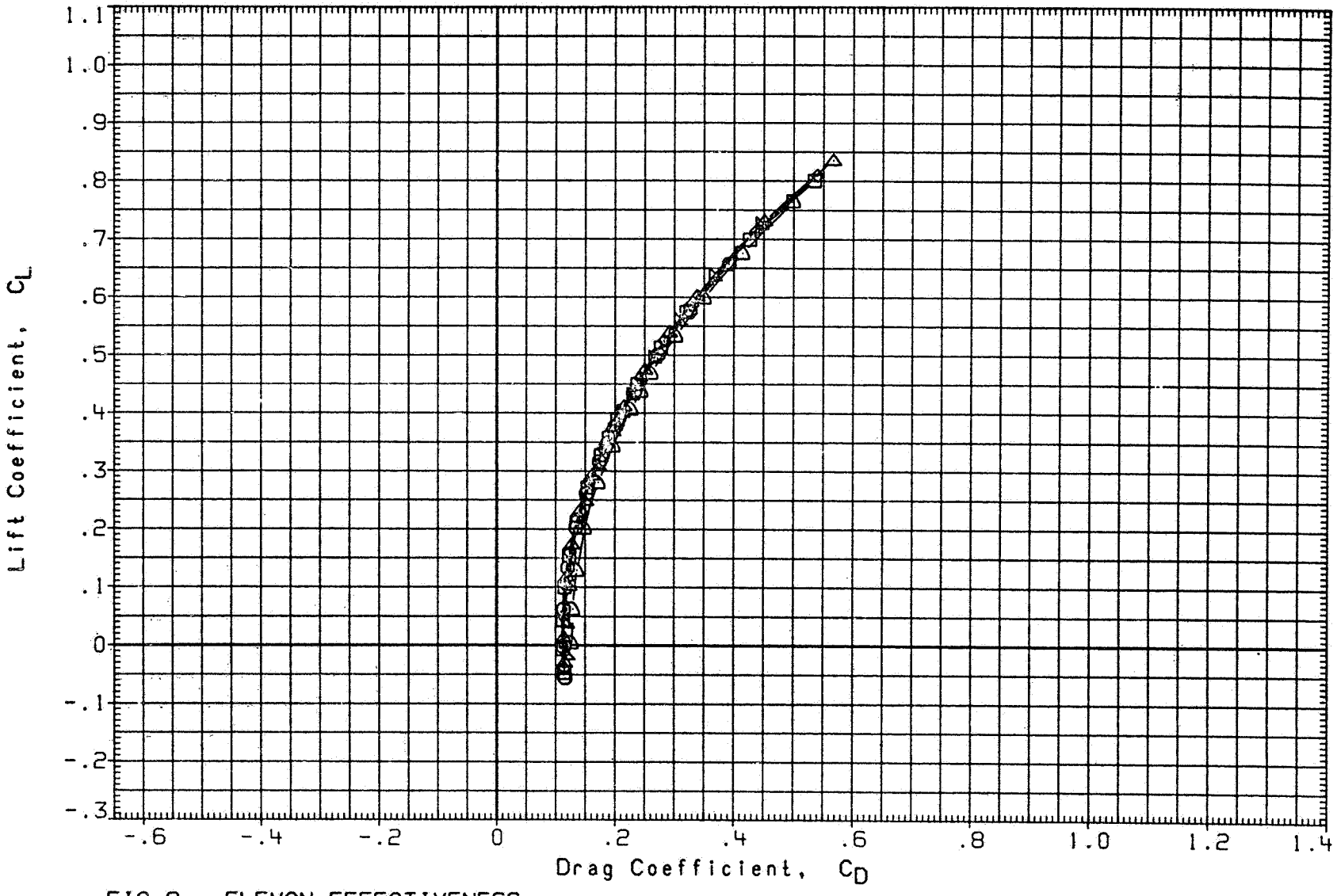


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H016	○	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
R2H015	□	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H012	△	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55.000	.000	2.500
R2H013	◁	AMES 118-1-87 OA145C 01	.000	10.000	.000	.000	55.000	.000	2.500
R2H014	▷	AMES 118-1-87 OA145C 01	.000	20.000	000	.000	55.000	.000	2.500

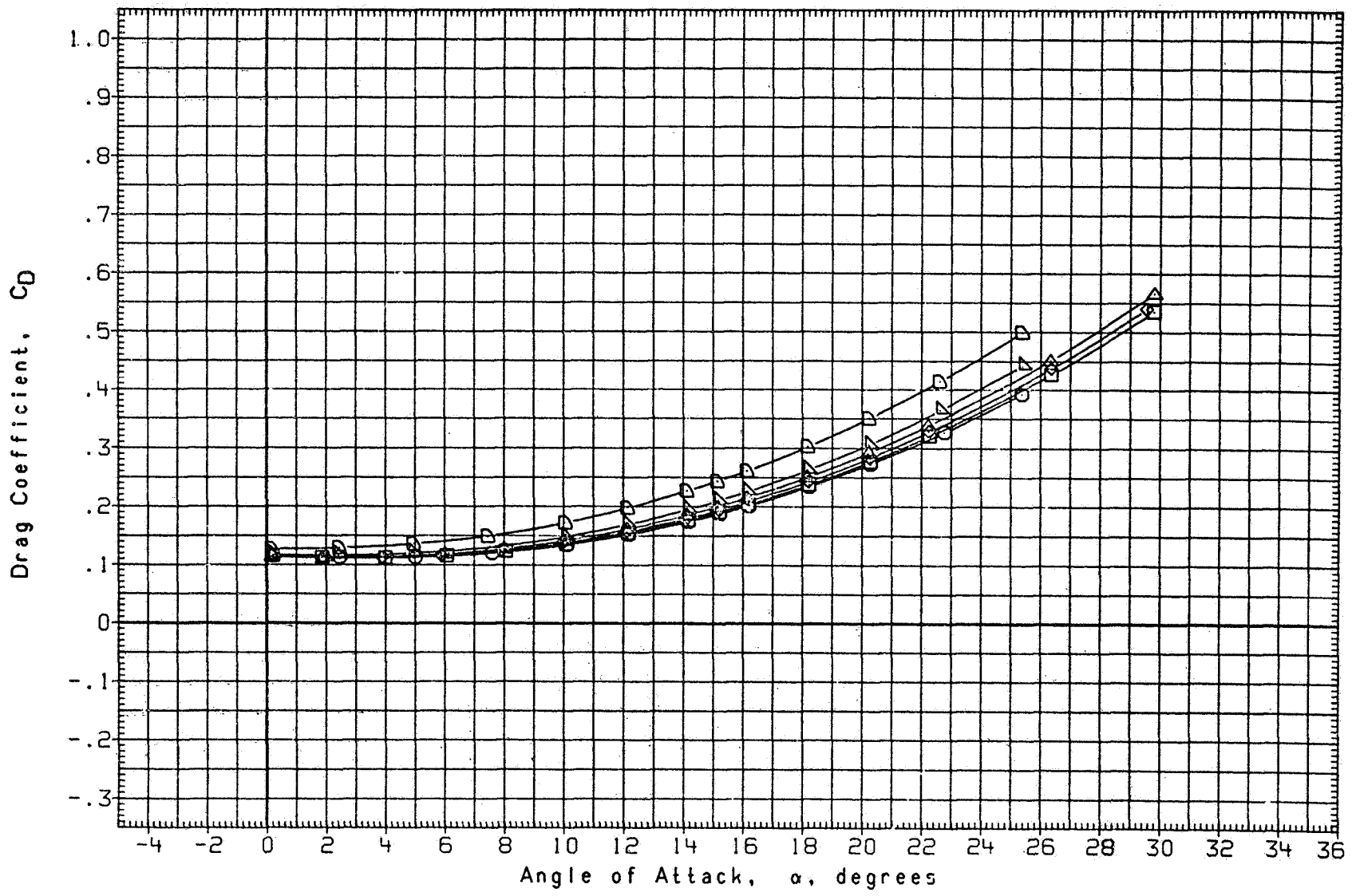


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H016	○	AMES 118-1-87 0A145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
R2H015	□	AMES 118-1-87 0A145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	◇	AMES 118-1-87 0A145C 01	.000	000	.000	.000	55.000	.000	2.500
R2H012	△	AMES 118-1-87 0A145C 01	.000	5.000	.000	.000	55.000	.000	2.500
R2H013	▽	AMES 118-1-87 0A145C 01	.000	10.000	.000	.000	55.000	.000	2.500
R2H014	▷	AMES 118-1-87 0A145C 01	.000	20.000	.000	.000	55.000	.000	2.500

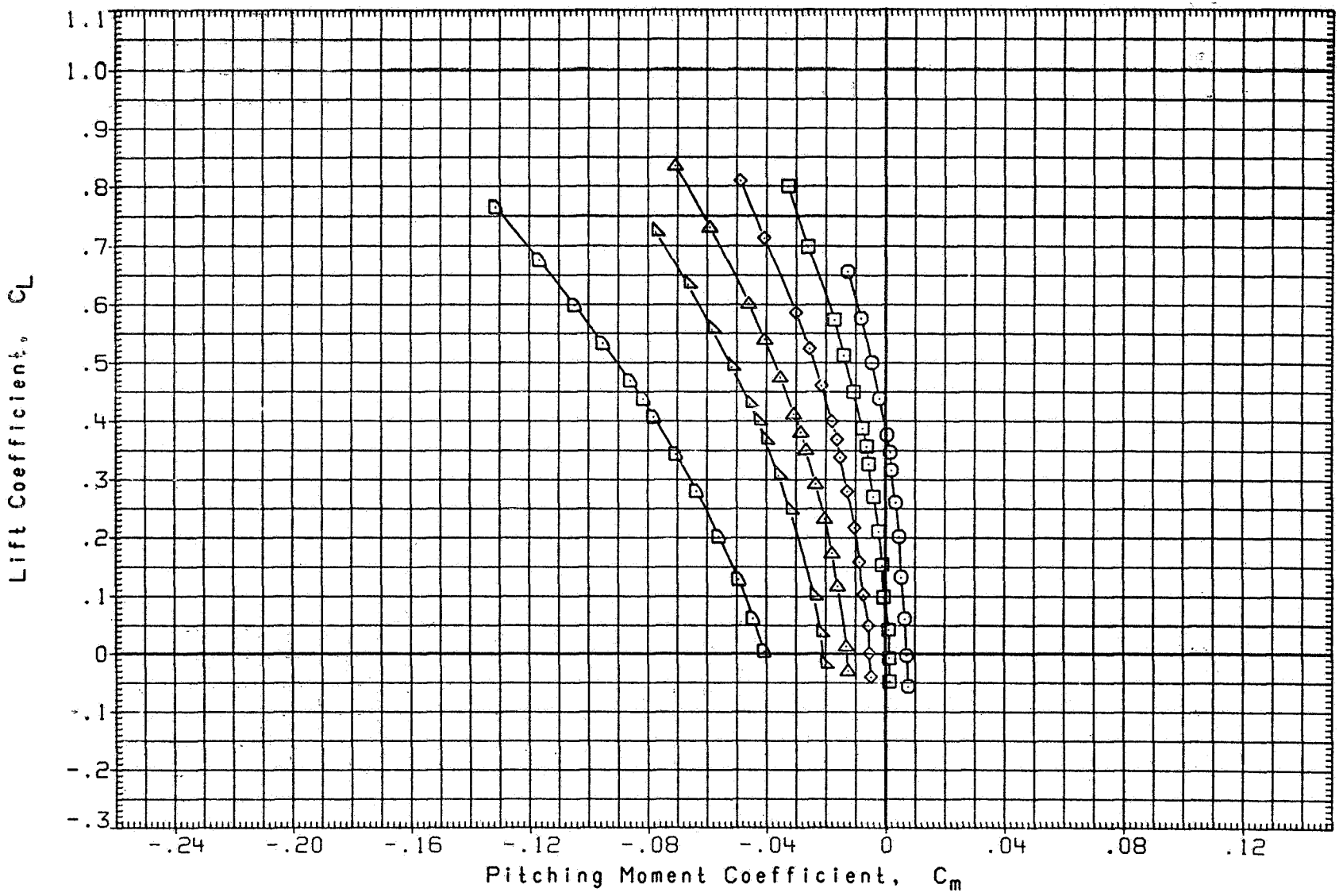


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H016	○	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
R2H015	□	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H012	△	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55.000	.000	2.500
R2H013	◺	AMES 118-1-87 OA145C 01	.000	10.000	.000	000	55.000	.000	2.500
R2H014	▱	AMES 118-1-87 OA145C 01	.000	20.000	.000	.000	55.000	.000	2.500

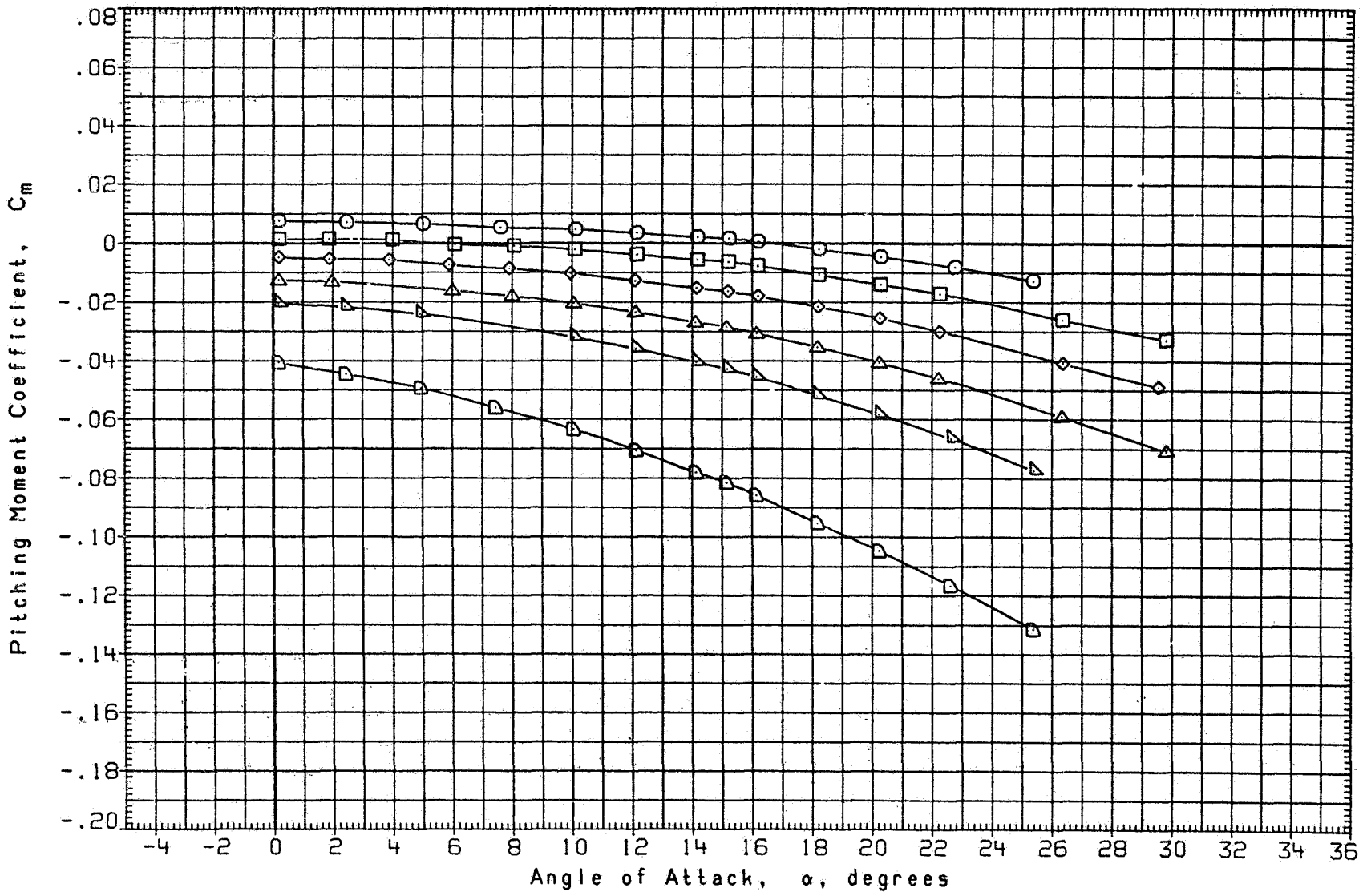


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H016	○	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
R2H015	□	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
R2H002	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H012	△	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55.000	.000	2.500
R2H013	▷	AMES 118-1-87 OA145C 01	.000	10.000	.000	.000	55.000	.000	2.500
R2H014	D	AMES 118-1-87 OA145C 01	.000	20.000	.000	.000	55.000	.000	2.500

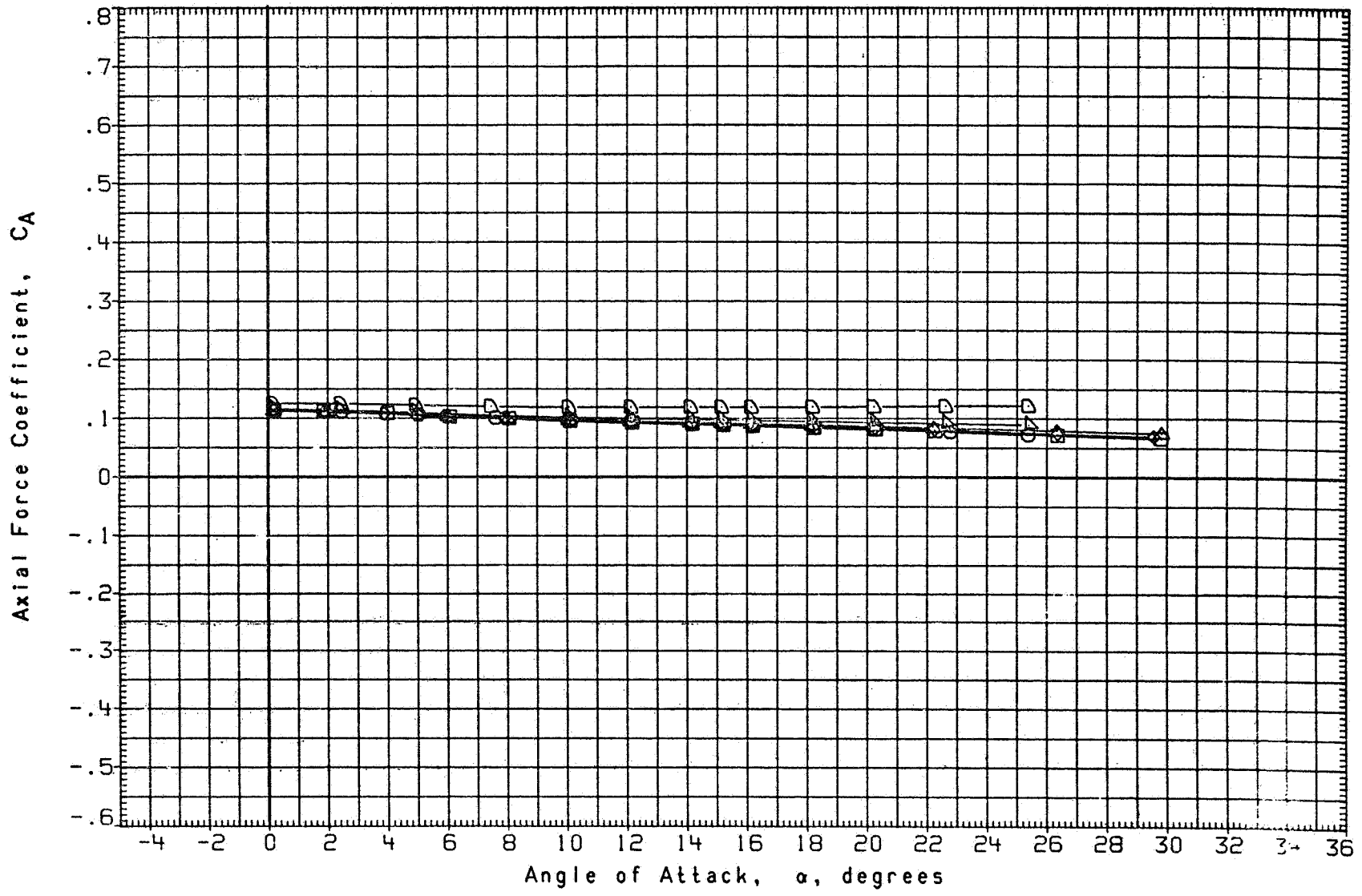


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H016	○	AMES 118-1-87 OA145C 01	.000	-10.000	000	.000	55.000	.000	2.500
G2H015	□	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
G2H002	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
G2H012	△	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55.000	.000	2.500
G2H013	▽	AMES 118-1-87 OA145C 01	.000	10.000	.000	.000	55.000	.000	2.500
G2H014	▷	AMES 118-1-87 OA145C 01	.000	20.000	.000	.000	55.000	.000	2.500

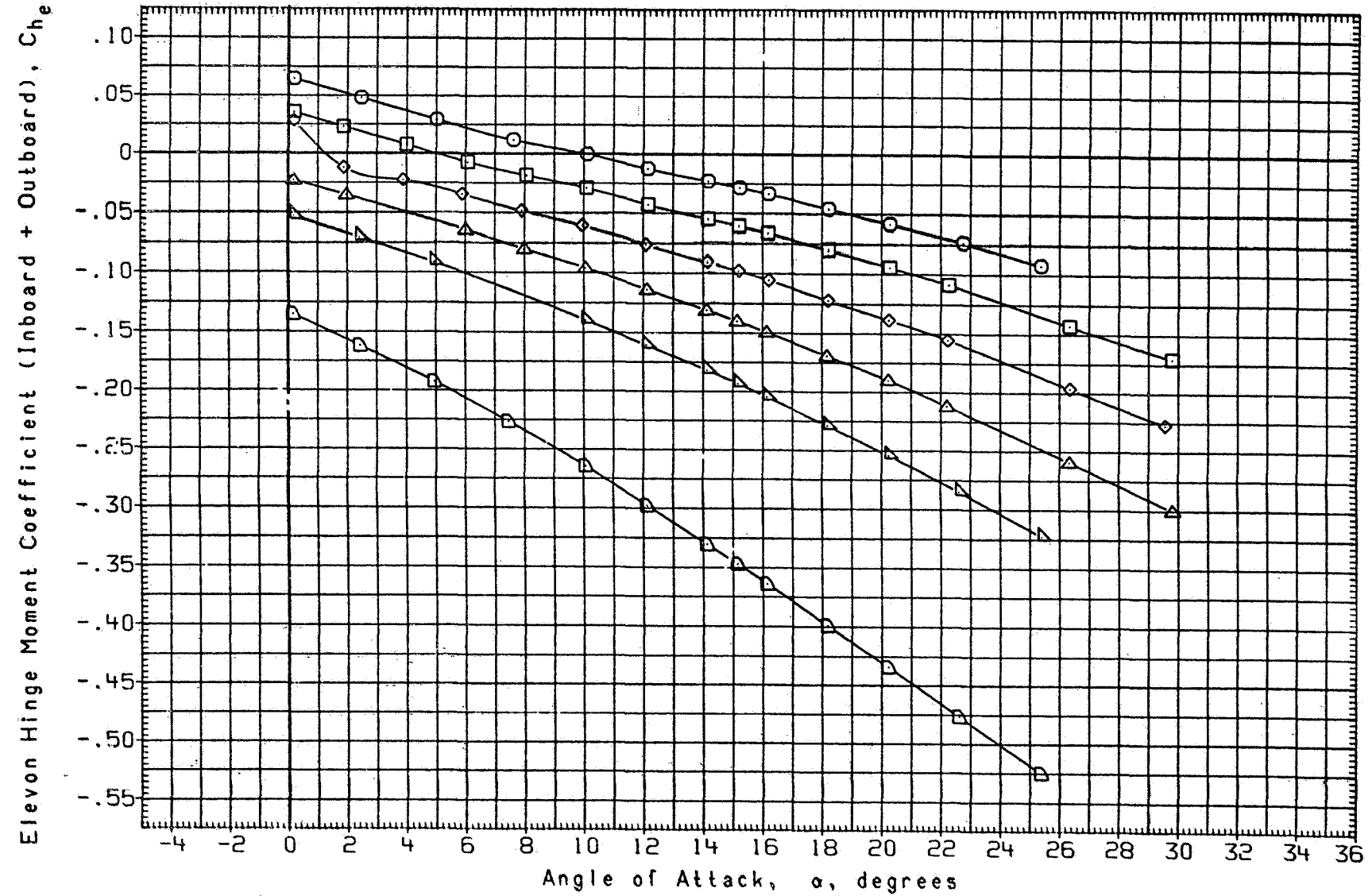


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H016	○	AMES 118-1-87 0A145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
G2H015	□	AMES 118-1-87 0A145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
G2H002	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	000	55.000	.000	2.500
G2H012	△	AMES 118-1-87 0A145C 01	.000	5.000	.000	.000	55.000	.000	2.500
G2H013	▽	AMES 118-1-87 0A145C 01	.000	10.000	.000	.000	55.000	.000	2.500
G2H014	▷	AMES 118-1-87 0A145C 01	.000	20.000	.000	.000	55.000	.000	2.500

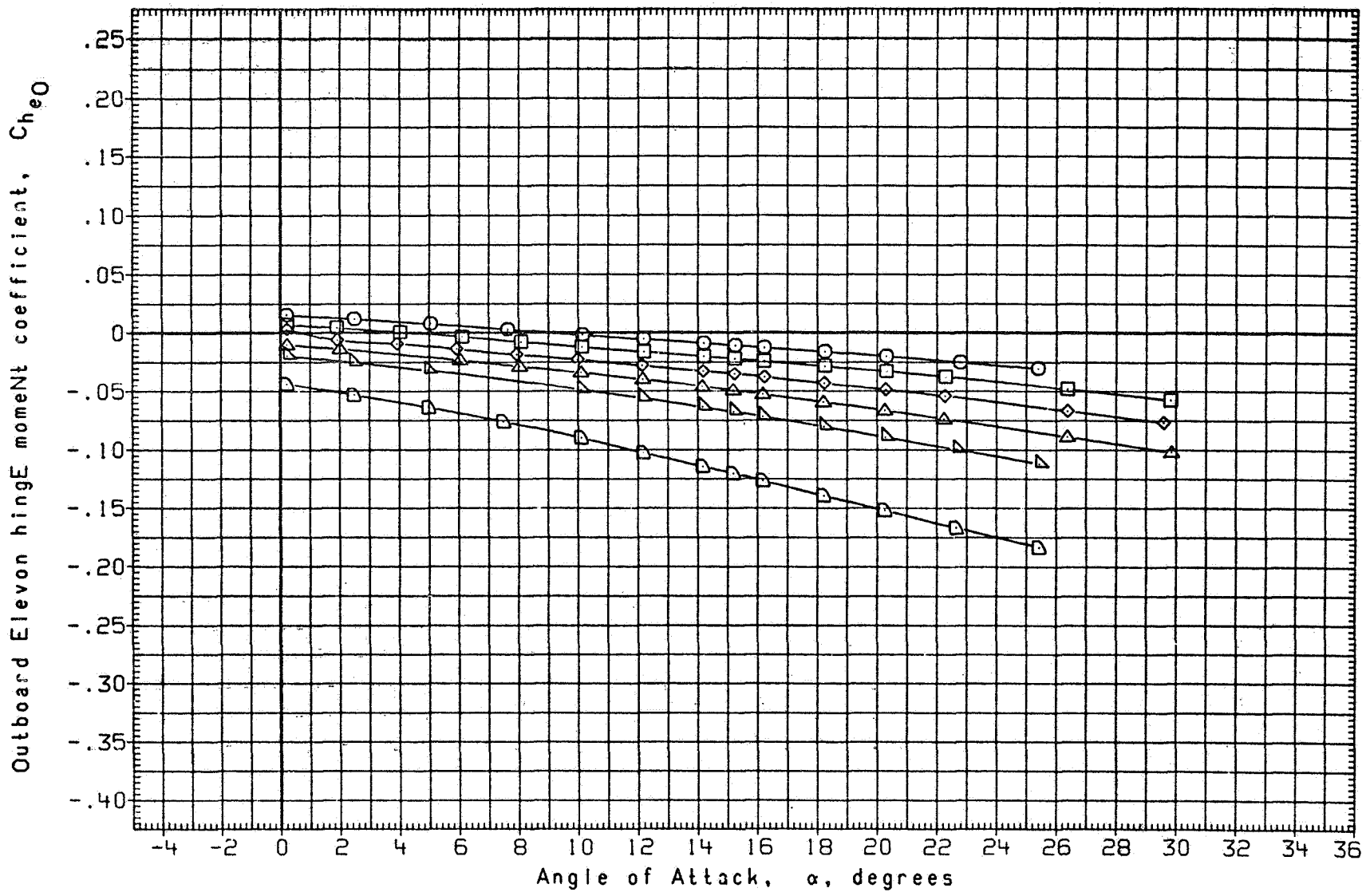


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H016	○	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
G2H015	□	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
G2H002	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
G2H012	△	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55.000	.000	2.500
G2H013	▷	AMES 118-1-87 OA145C 01	.000	10.000	.000	.000	55.000	.000	2.500
G2H014	D	AMES 118-1-87 OA145C 01	.000	20.000	.000	.000	55.000	.000	2.500

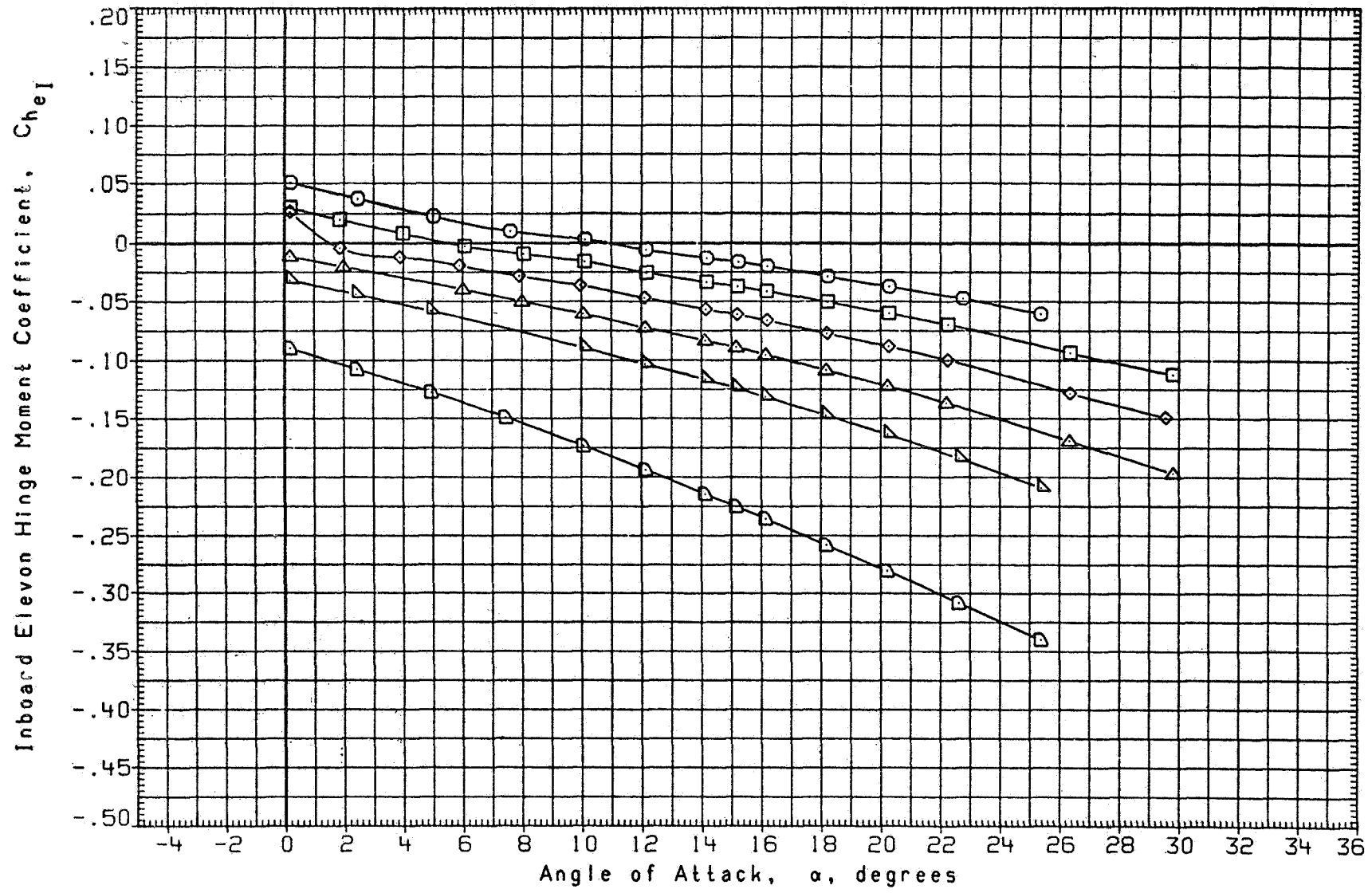


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H016	○	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
G2H015	□	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
G2H002	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
G2H012	△	AMES 118-1-87 OA145C 01	.000	5.000	000	.000	55.000	.000	2.500
G2H013	▽	AMES 118-1-87 OA145C 01	.000	10 000	000	.000	55 000	.000	2.500
G2H014	▱	AMES 118-1-87 OA145C 01	.000	20 000	.000	.000	55 000	.000	2.500

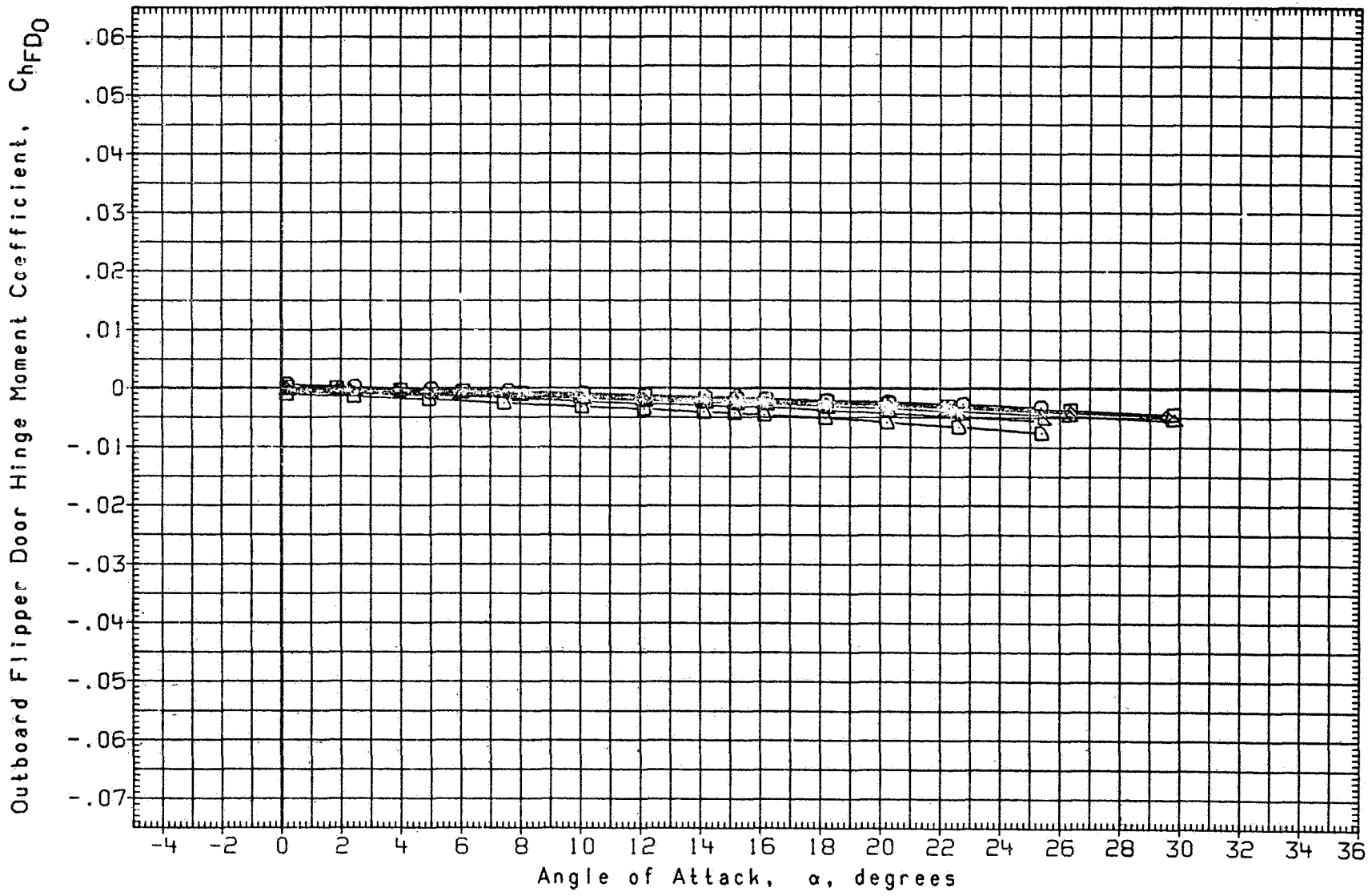


FIG.8 ELEVON EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H016	○	AMES 118-1-87 OA145C 01	.000	-10.000	.000	.000	55.000	.000	2.500
G2H015	□	AMES 118-1-87 OA145C 01	.000	-5.000	.000	.000	55.000	.000	2.500
G2H002	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
G2H012	△	AMES 118-1-87 OA145C 01	.000	5.000	.000	.000	55.000	.000	2.500
G2H013	▽	AMES 118-1-87 OA145C 01	.000	10.000	.000	.000	55.000	.000	2.500
G2H014	▷	AMES 118-1-87 OA145C 01	.000	20.000	.000	.000	55.000	.000	2.500

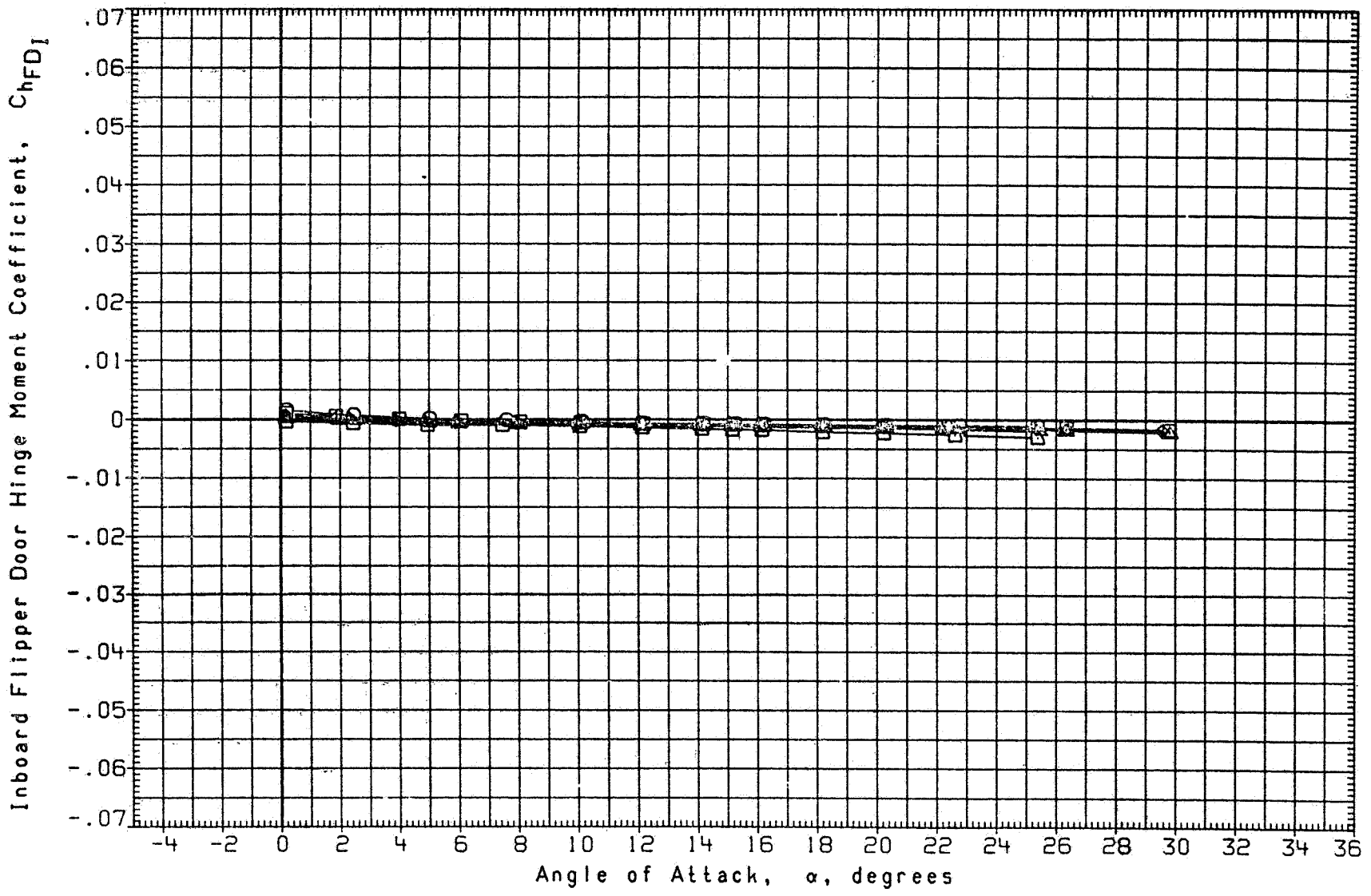


FIG.8 ELEVON EFFECTIVENESS

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H056	○	AMES 118-1-87 0A145C 01	.000	.000	.000	-11.700	55.000	.000	2.500
R2H057	□	AMES 118-1-87 0A145C 01	.000	.000	.000	16.300	55.000	.000	2.500
R2H058	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	22.500	55.000	.000	2.500

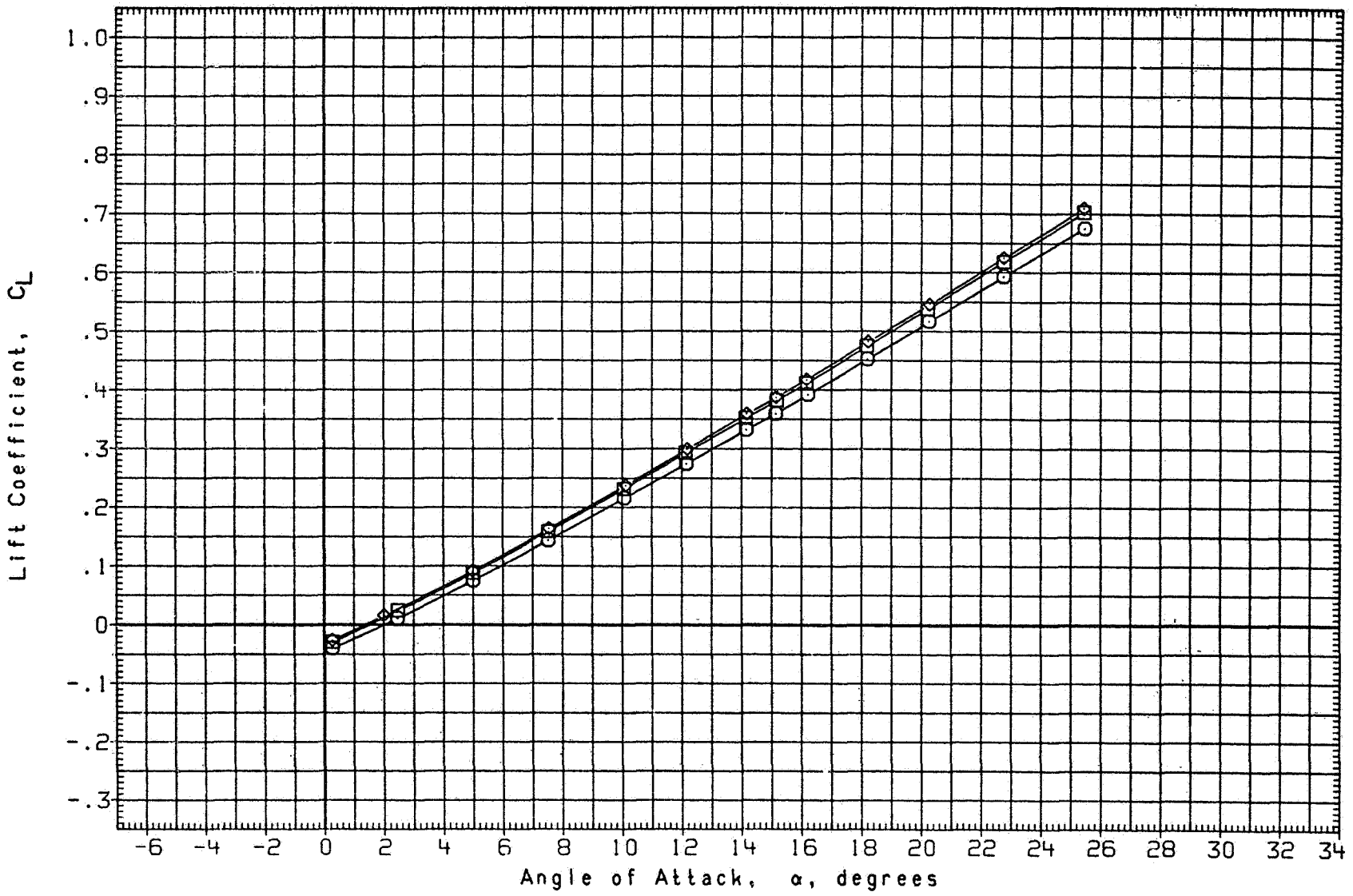


FIG.9 BODYFLAP LONGITUDINAL EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H056	○	AMES 118-1-87 OA145C 01	.000	.000	.000	-11.700	55.000	.000	2.500
R2H057	□	AMES 118-1-87 OA145C 01	.000	.000	.000	16.300	55.000	.000	2.500
R2H058	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	22.500	55.000	.000	2.500

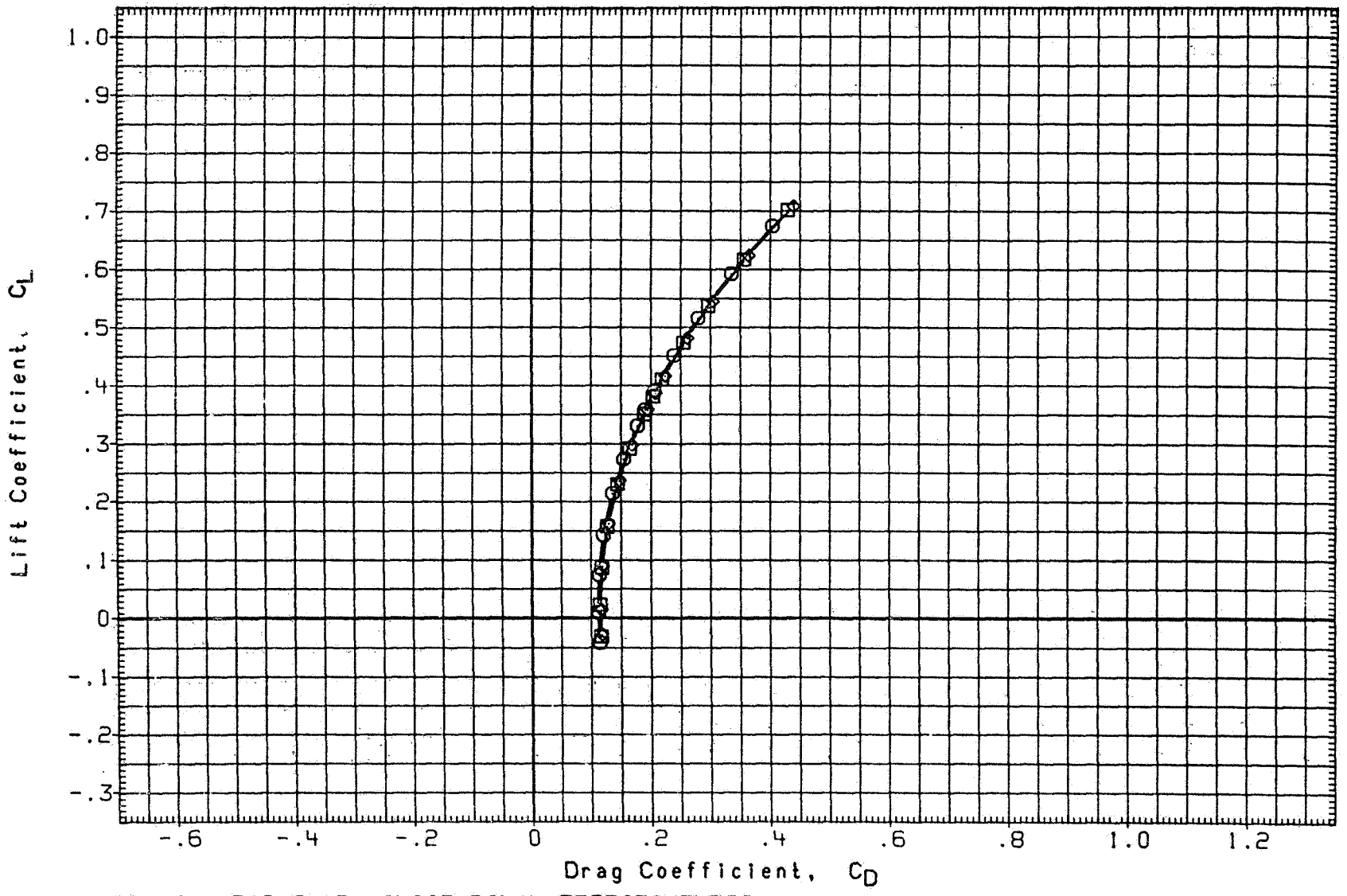


FIG.9 BODYFLAP LONGITUDINAL EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H056	○	AMES 118-1-87 0A145C 01	.000	.000	.000	-11.700	55.000	.000	2.500
R2H057	□	AMES 118-1-87 0A145C 01	.000	.000	.000	16.300	55.000	.000	2.500
R2H058	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	22.500	55.000	.000	2.500

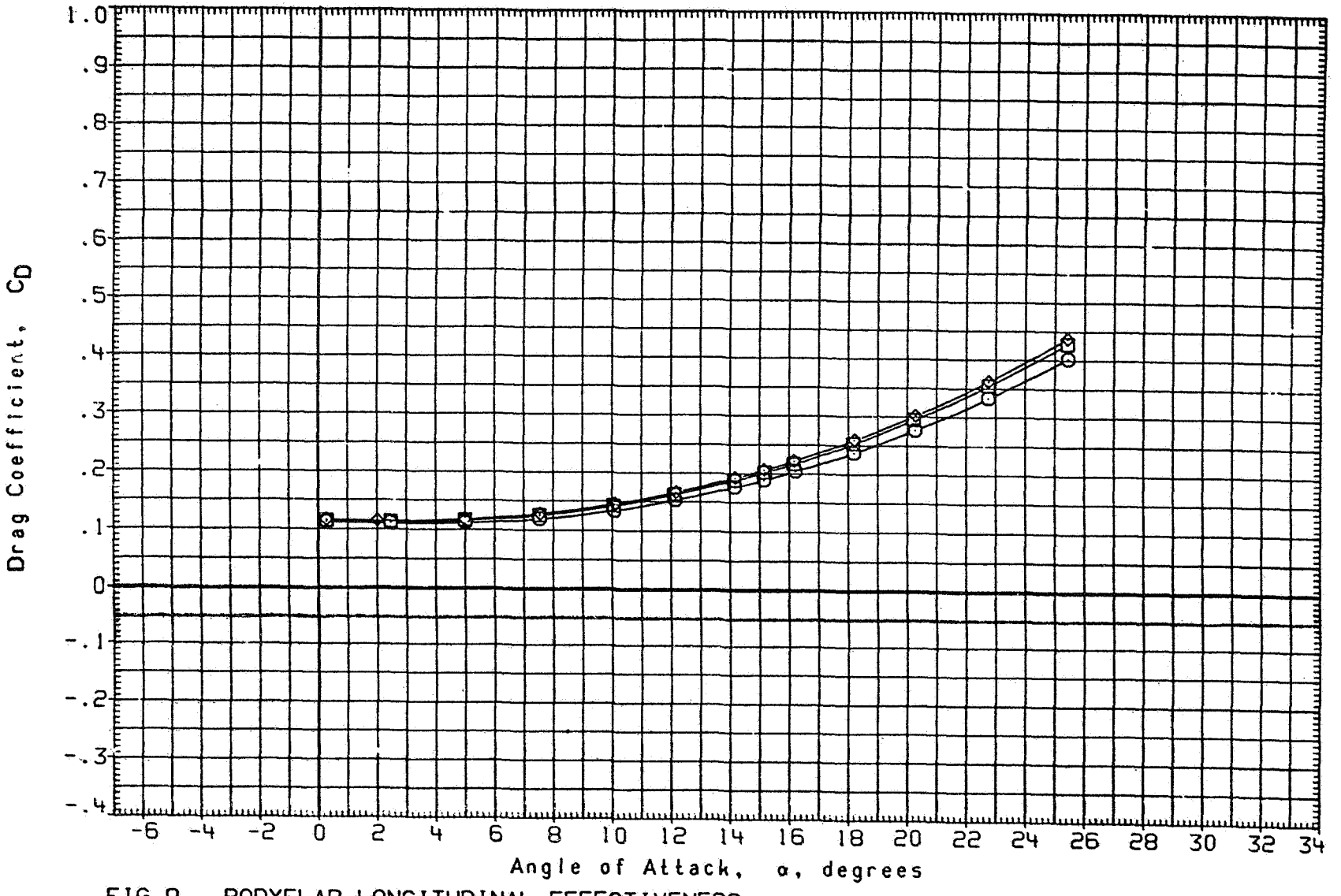


FIG.9 BODYFLAP LONGITUDINAL EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H056	○	AMES 118-1-87 0A145C 01	.000	.000	.000	-11.700	55.000	.000	2.500
R2H057	□	AMES 118-1-87 0A145C 01	.000	.000	.000	16.300	55.000	.000	2.500
R2H058	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	22.500	55.000	.000	2.500

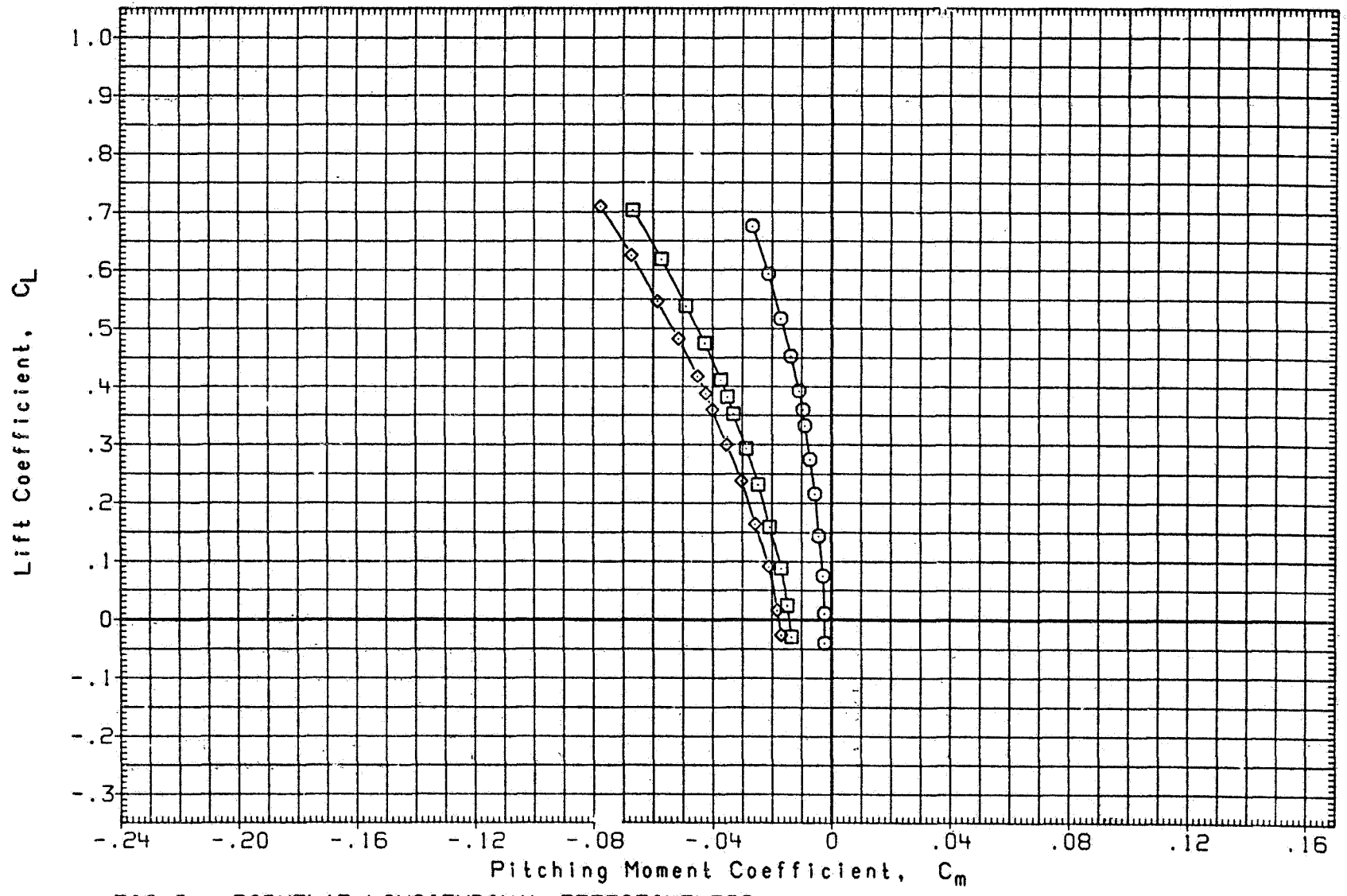


FIG.9 BODYFLAP LONGITUDINAL EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H056	○	AMES 118-1-87 0A145C 01	.000	.000	.000	-11.700	55.000	.000	2.500
R2H057	□	AMES 118-1-87 0A145C 01	.000	.000	.000	16.300	55.000	.000	2.500
R2H058	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	22.500	55.000	.000	2.500

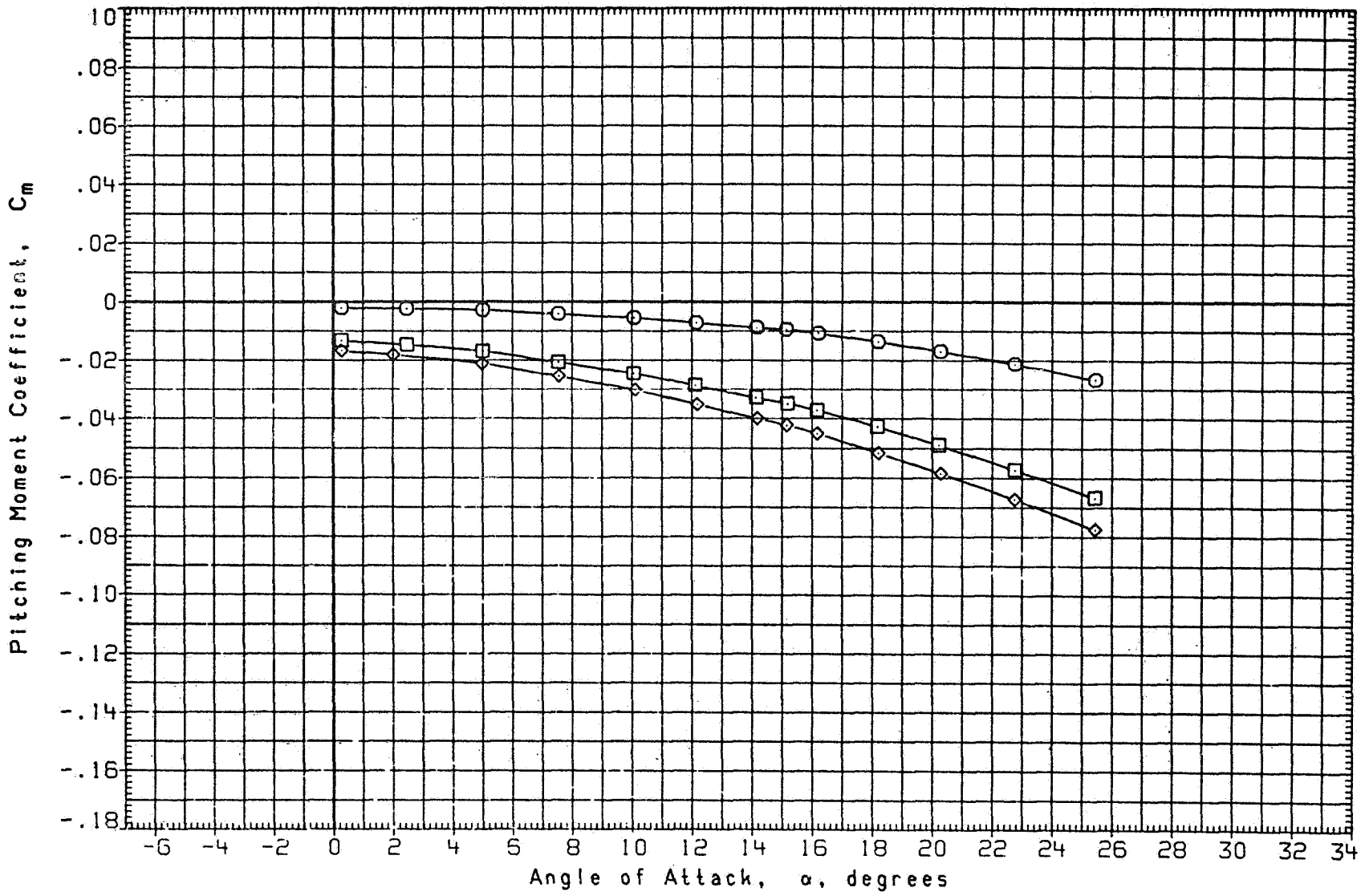


FIG.9 BODYFLAP LONGITUDINAL EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H056	○	AMES 118-1-87 0A145C 01	.000	.000	000	-11.700	55.000	.000	2.500
R2H057	□	AMES 118-1-87 0A145C 01	.000	.000	.000	16.300	55.000	.000	2.500
R2H058	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	22.500	55.000	.000	2.500

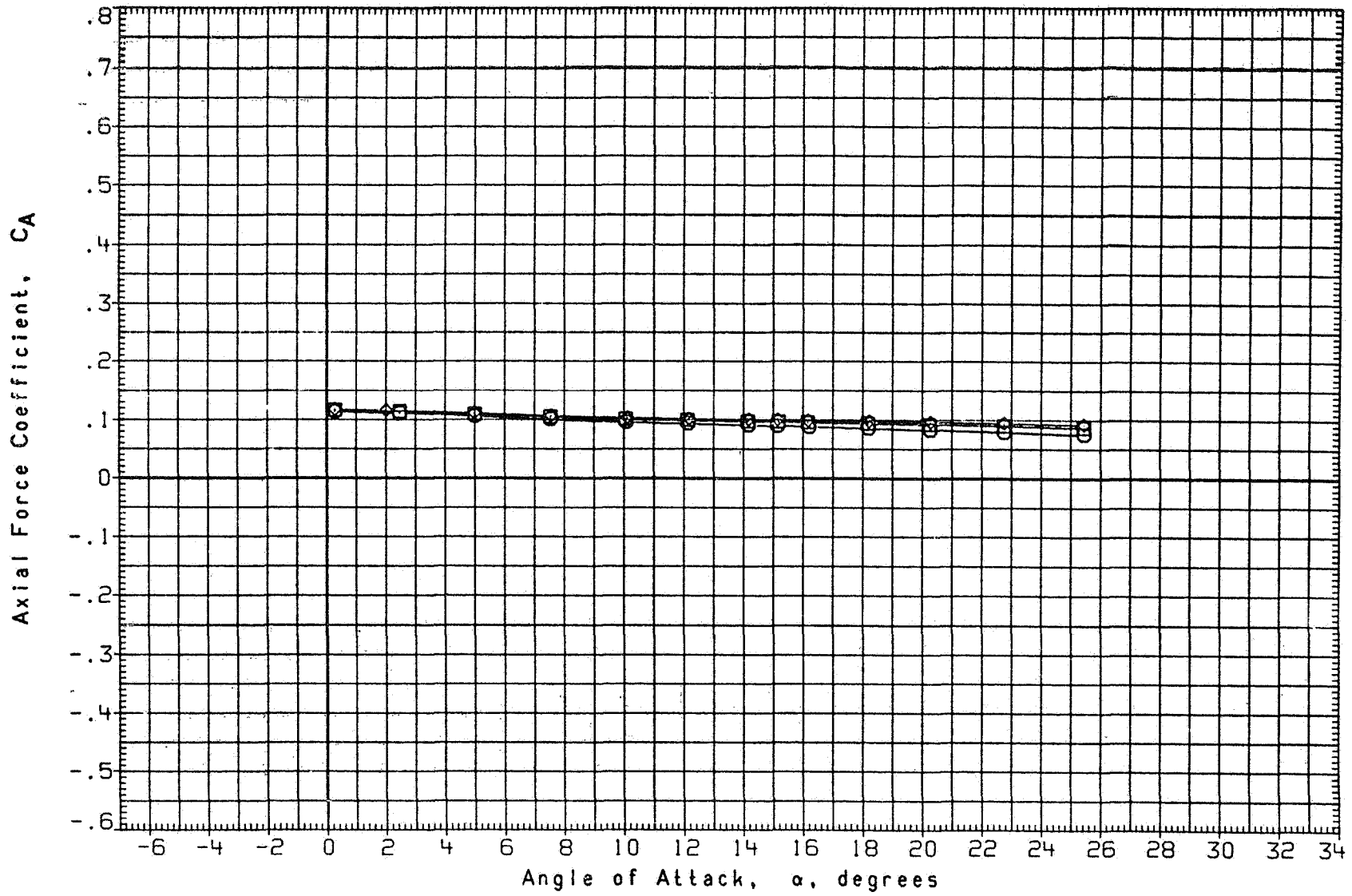


FIG.9 BODYFLAP LONGITUDINAL EFFECTIVENESS

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H064	○	AMES 118-1-87 OA145C 01	.000	.000	000	.000	25.000	.000	2.500
R2H076	□	AMES 118-1-87 OA145C 01	.000	.000	000	.000	40.000	.000	2.500
R2H002	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H086	◁	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	70.000	.000	2.500
R2H094	△	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	87.200	.000	2.500

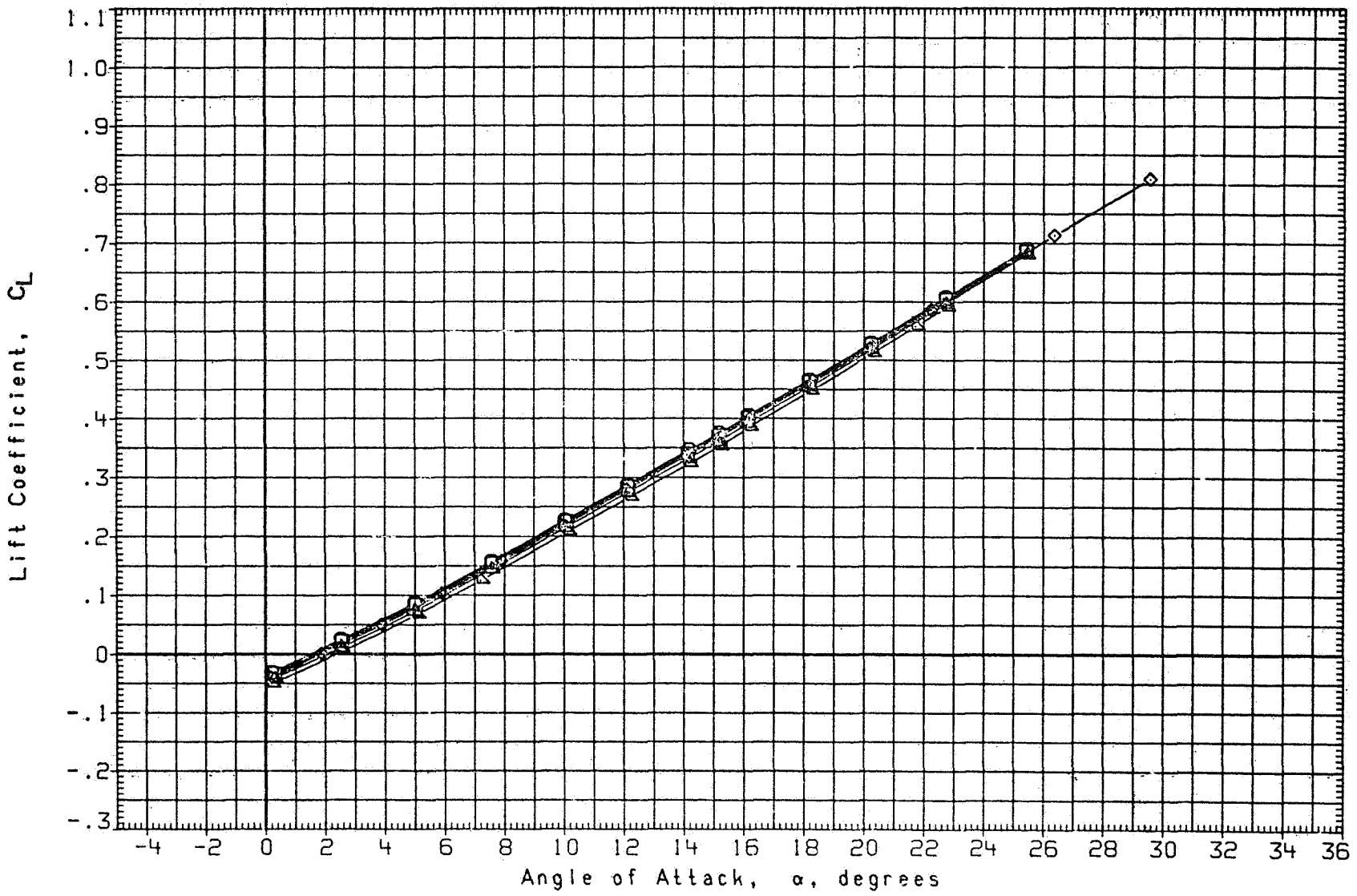


FIG.10 EFFECT OF SPEEDBRAKE DEFLECTION ON LONGITUDINAL DATA

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H064	○	AMES 118-1-87 0A145C 01	.000	.000	000	.000	25.000	.000	2.500
R2H076	□	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	40.000	.000	2.500
R2H002	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H085	△	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	70.000	.000	2.500
R2H094	▷	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	87.200	.000	2.500

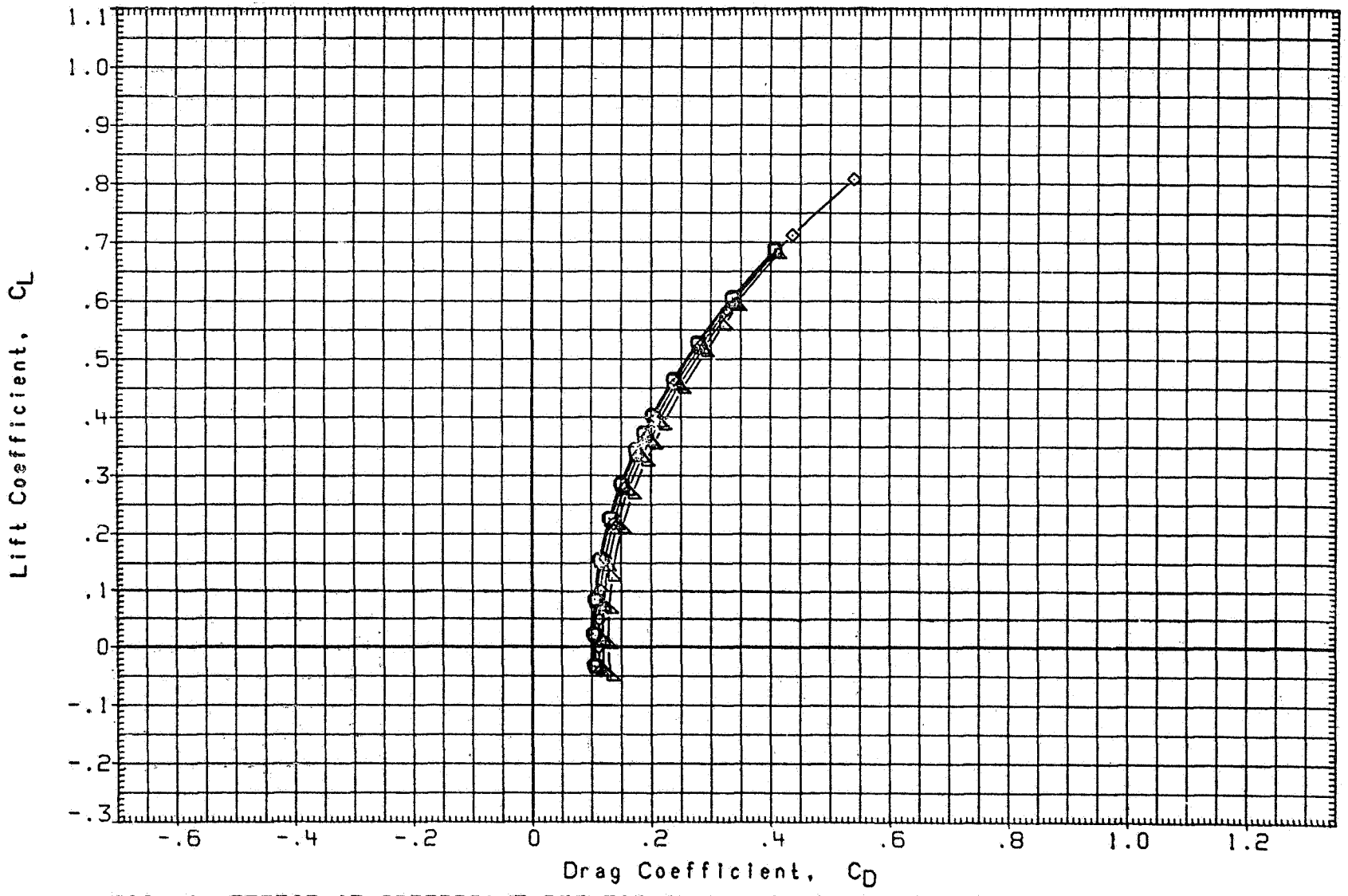


FIG.10 EFFECT OF SPEEDBRAKE DEFLECTION ON LONGITUDINAL DATA

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H064	○	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	25.000	.000	2.500
R2H076	□	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	40.000	.000	2.500
R2H002	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H085	△	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	70.000	.000	2.500
R2H094	◁	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	87.200	.000	2.500

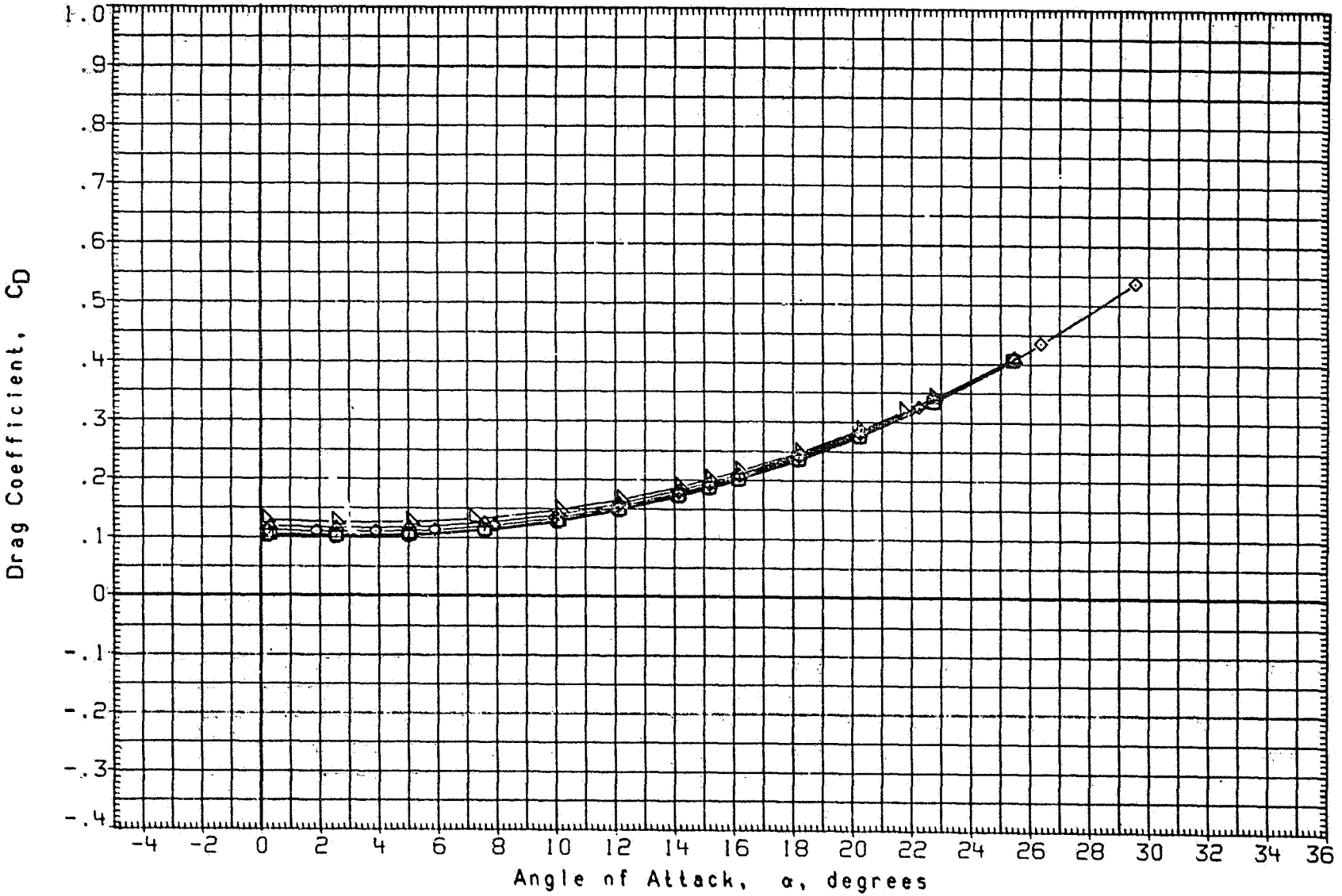


FIG.10 EFFECT OF SPEEDBRAKE DEFLECTION ON LONGITUDINAL DATA

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H064	○	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	25.000	.000	2.500
R2H076	□	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	40.000	.000	2.500
R2H002	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H085	△	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	70.000	.000	2.500
R2H094	▽	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	87.200	.000	2.500

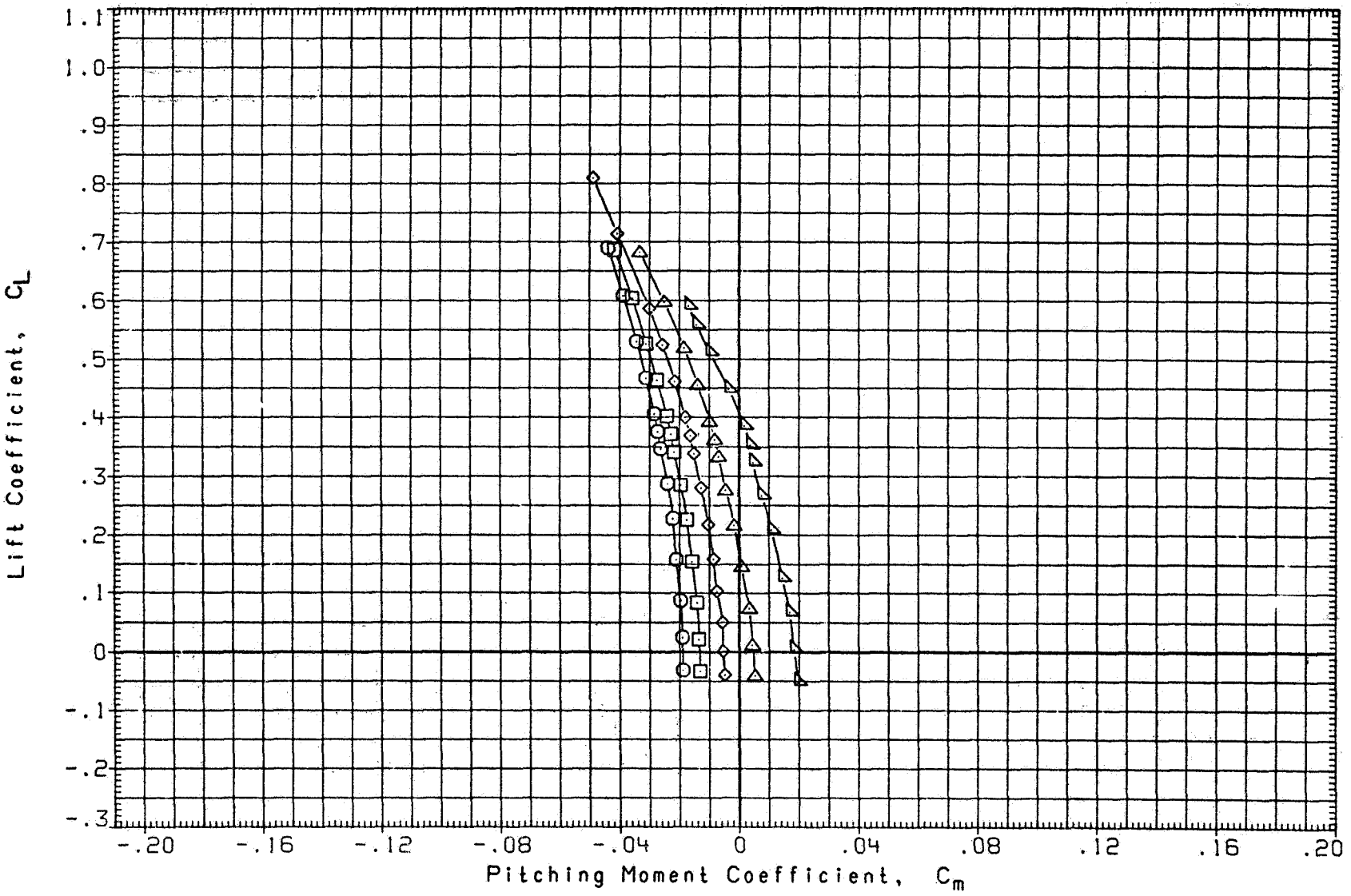


FIG.10 EFFECT OF SPEEDBRAKE DEFLECTION ON LONGITUDINAL DATA

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H064	○	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	25.000	.000	2.500
R2H076	□	AMES 118-1-87 0A145C 01	000	.000	.000	.000	40.000	.000	2.500
R2H002	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	55.000	.000	2.500
R2H085	△	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	70.000	.000	2.500
R2H094	↖	AMES 118-1-87 0A145C 01	.000	.000	.000	.000	87.200	.000	2.500

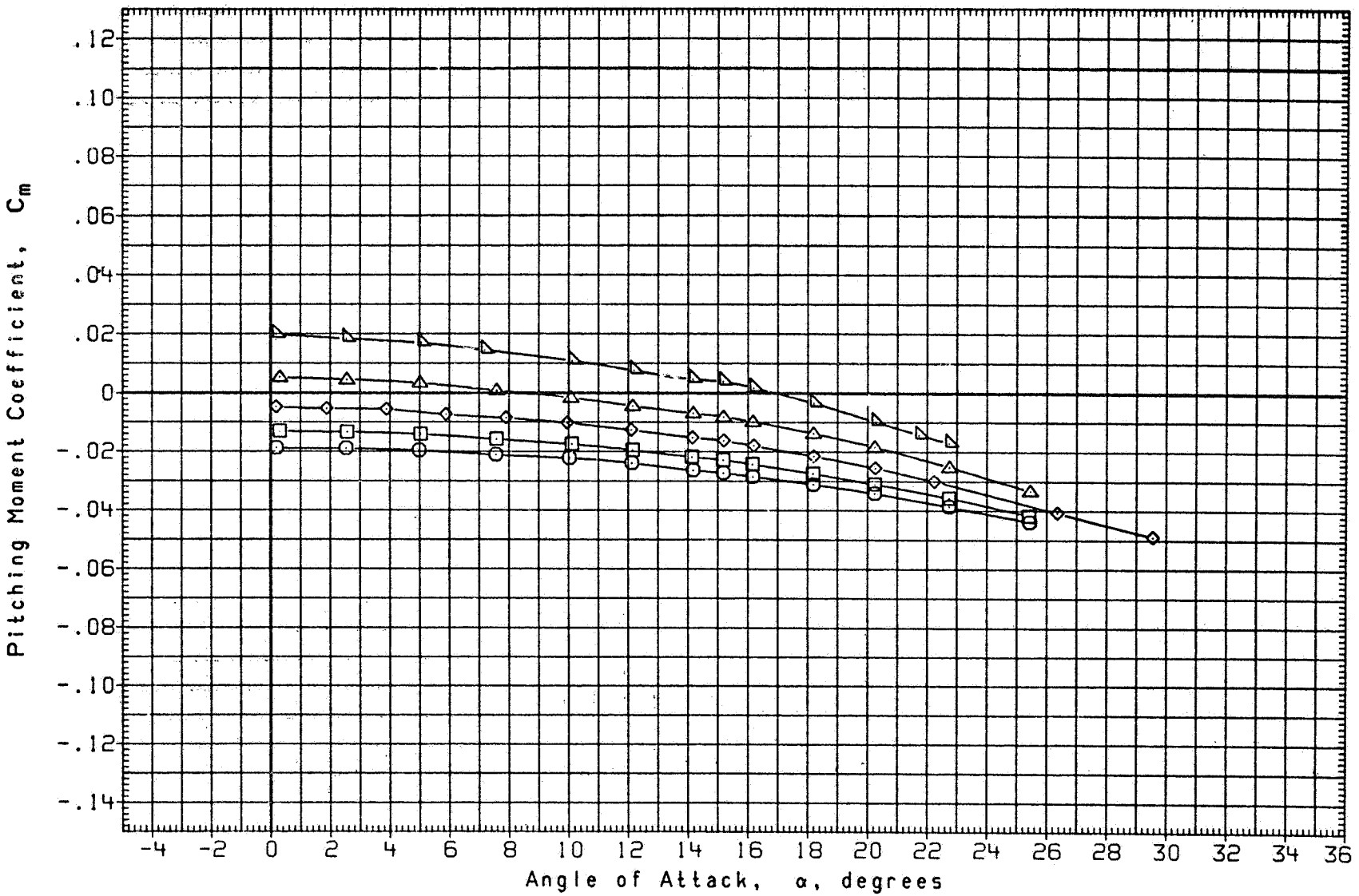


FIG.10 EFFECT OF SPEEDBRAKE DEFLECTION ON LONGITUDINAL DATA

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H064	○	AMES 118-1-87 0A145C 01	.000	.000	000	.000	25.000	.000	2.500
R2H076	□	AMES 118-1-87 0A145C 01	.000	.000	.000	000	40 000	.000	2.500
R2H002	◇	AMES 118-1-87 0A145C 01	.000	.000	.000	000	55.000	.000	2.500
R2H085	△	AMES 118-1-87 0A145C 01	.000	.000	000	000	70 000	.000	2.500
R2H094	▽	AMES 118-1-87 0A145C 01	.000	.000	.000	000	87.200	000	2.500

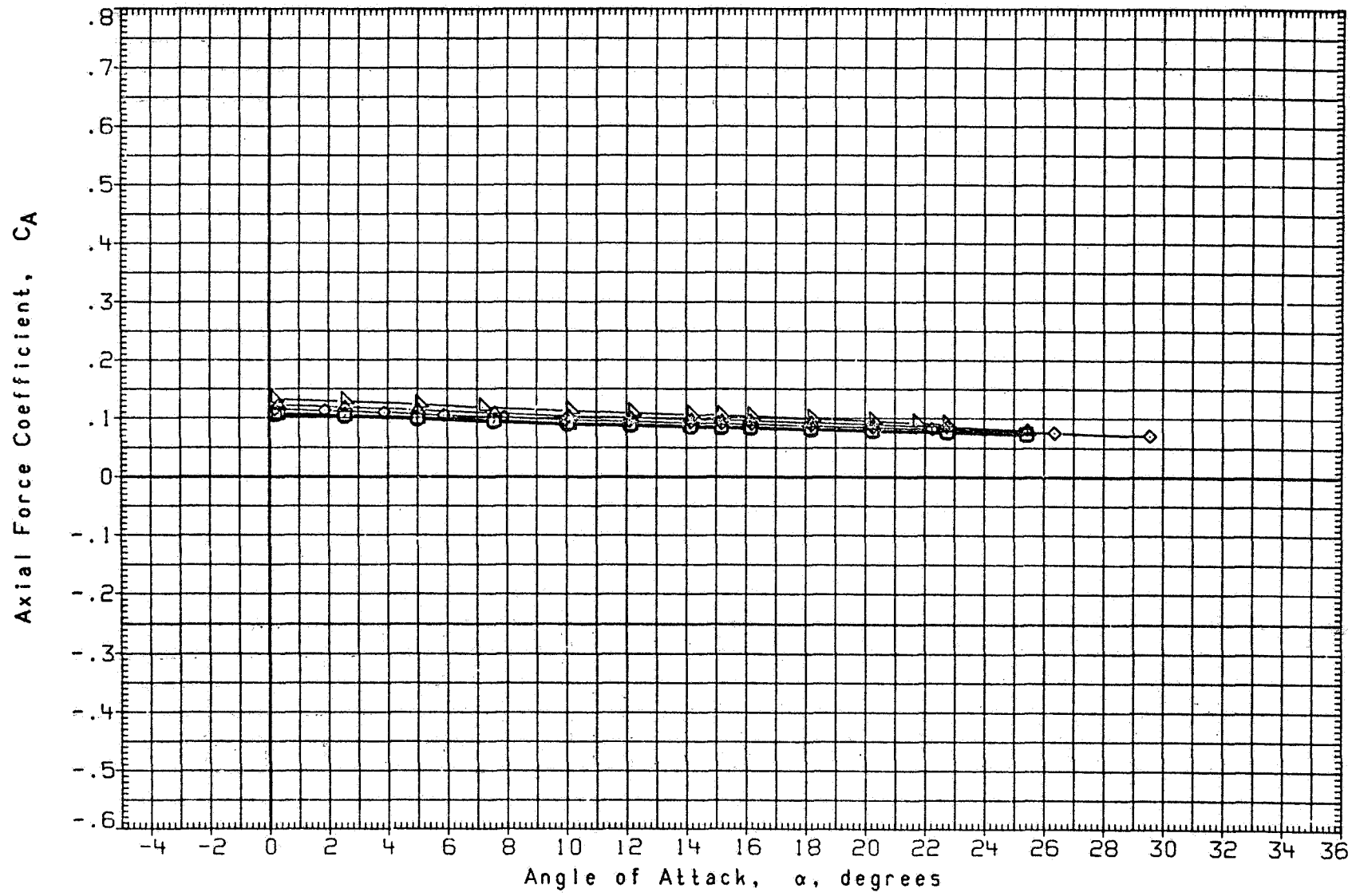


FIG.10 EFFECT OF SPEEDBRAKE DEFLECTION ON LONGITUDINAL DATA

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H064	○	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	25.000	.000	2.500
G2H076	□	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	40.000	.000	2.500
G2H002	◇	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	55.000	.000	2.500
G2H085	△	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	70.000	.000	2.500
G2H094	◁	AMES 118-1-87 OA145C 01	.000	.000	.000	.000	87.200	.000	2.500

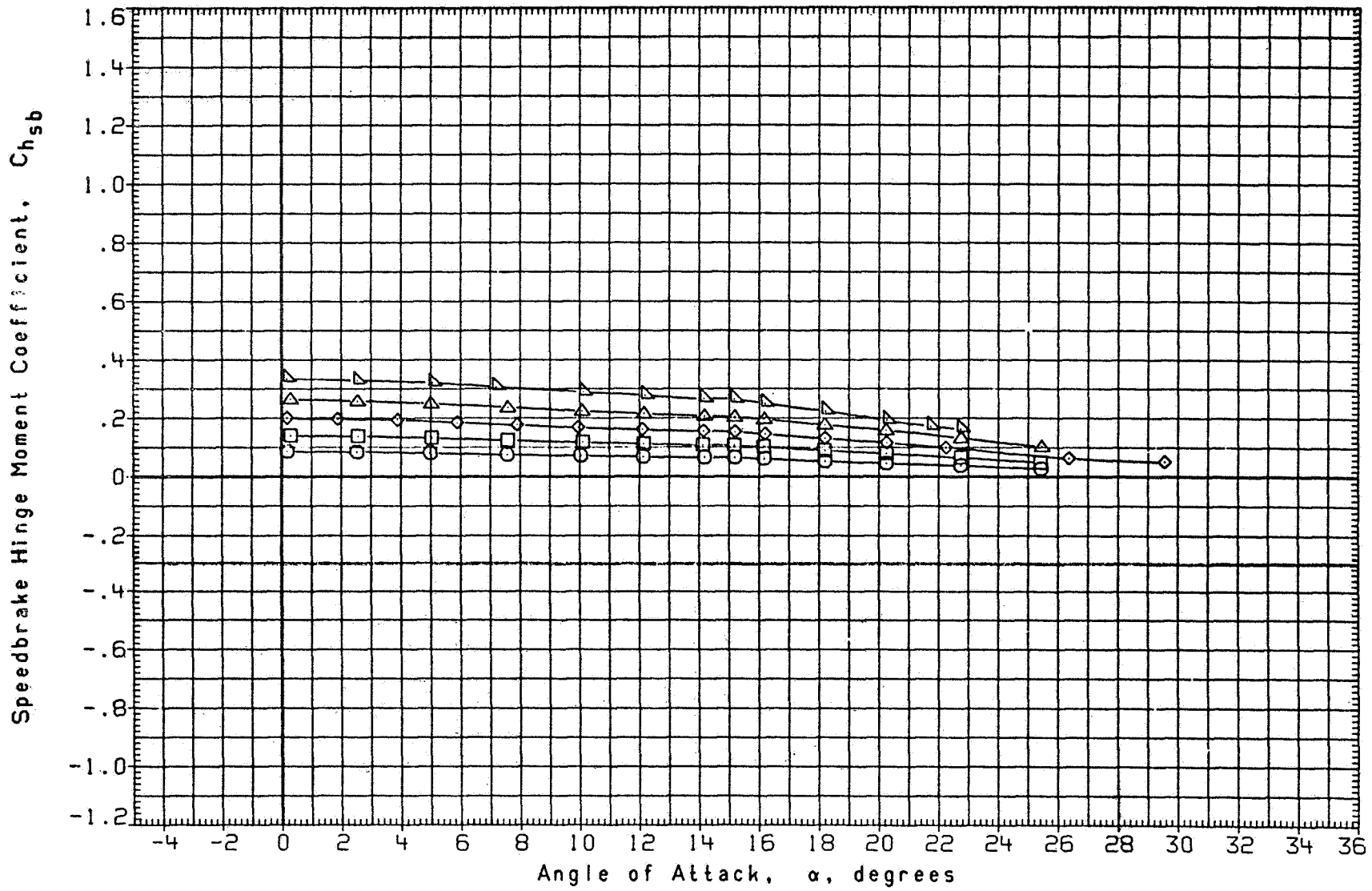


FIG.10 EFFECT OF SPEEDBRAKE DEFLECTION ON LONGITUDINAL DATA

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H065	○	AMES 118-1-87 0A145C 01	10.000	.000	000	.000	25.000	.000	2.500
R2H006	□	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H095	◇	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	87.200	.000	2.500

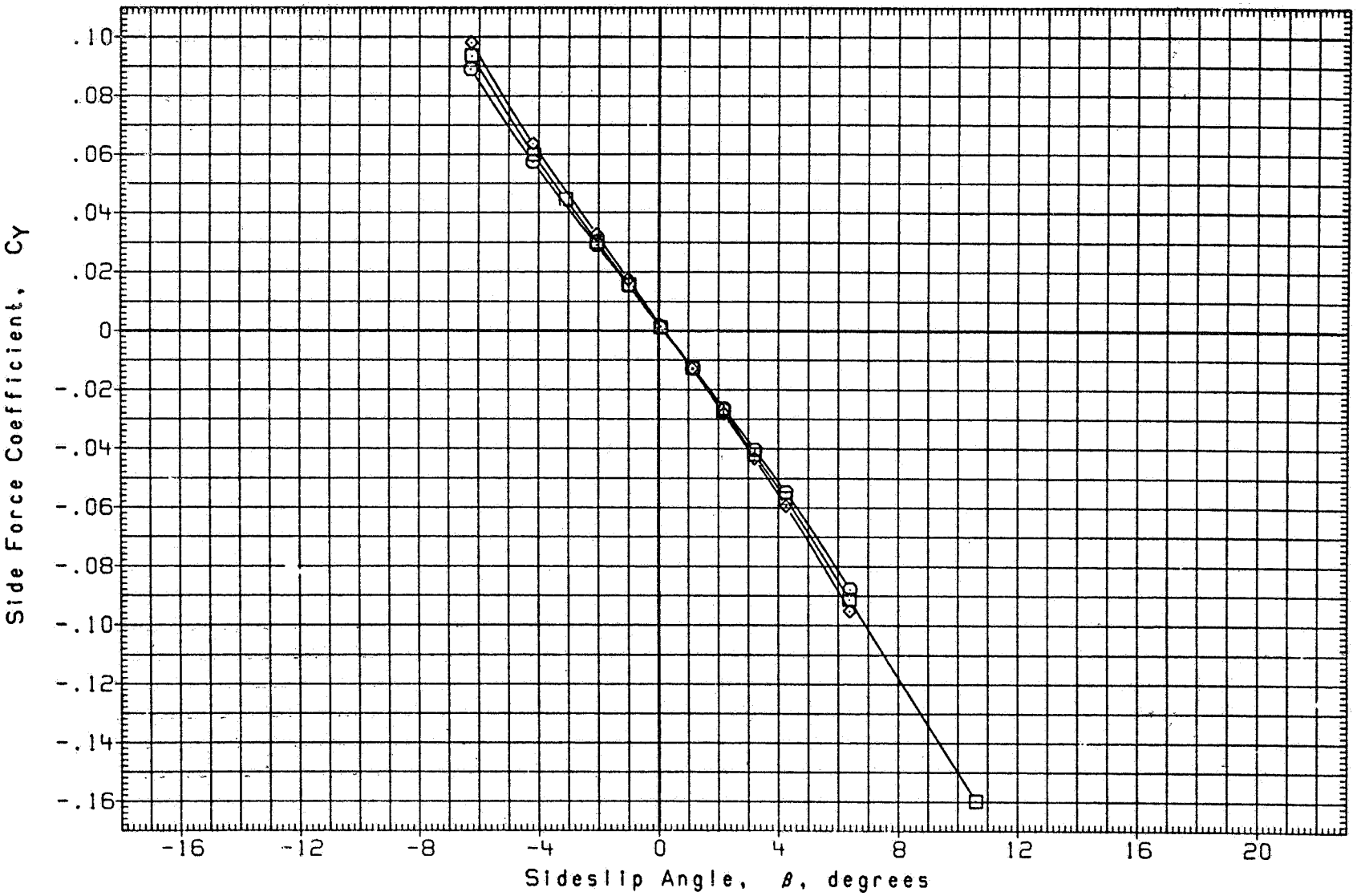


FIG.11 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H065	○	AMES 118-1-87 0A145C 01	10.000	.000	000	.000	25.000	.000	2.500
R2H006	□	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H095	◇	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	87.200	.000	2.500

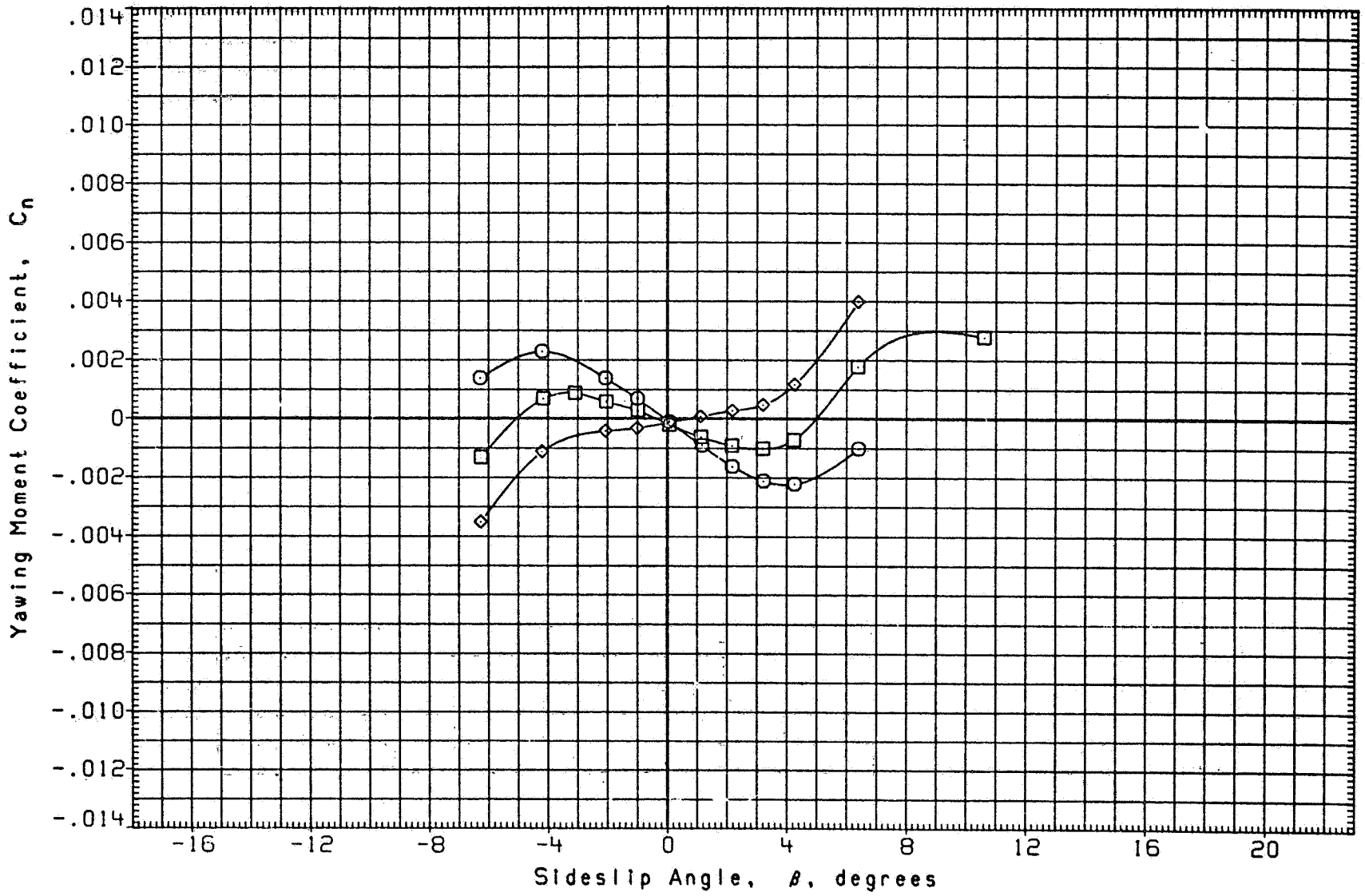


FIG.11 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
R2H065	○	AMES 118-1-87 0A145C 01
R2H006	□	AMES 118-1-87 0A145C 01
R2H095	◇	AMES 118-1-87 0A145C 01

ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
10.000	.000	.000	.000	25.000	.000	2.500
10.000	.000	.000	.000	55.000	.000	2.500
10.000	.000	.000	.000	87.200	.000	2.500

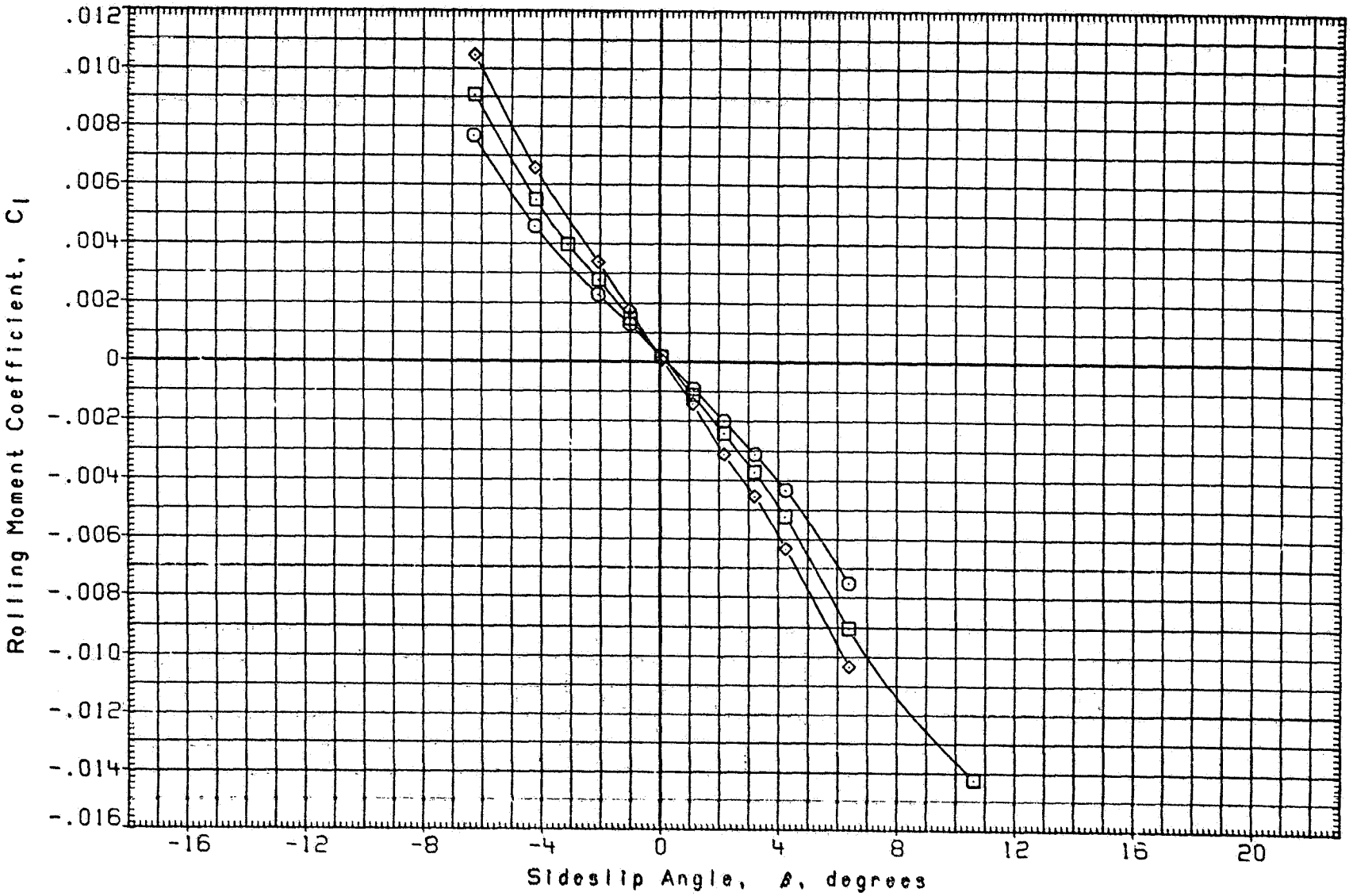


FIG.11 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=10 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H006	O	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	55.000	.000	2.500

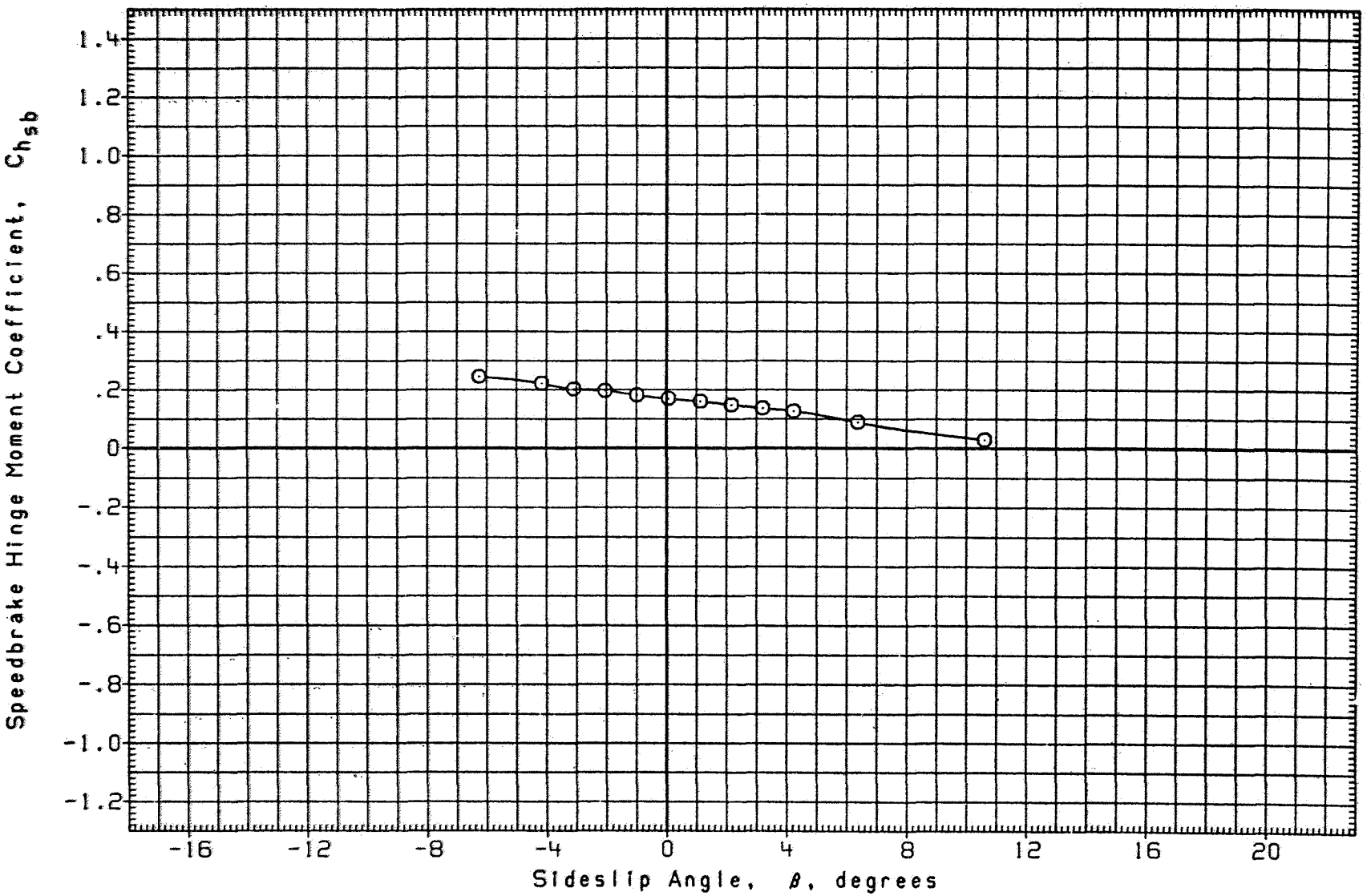


FIG.11 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=10 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H066	○	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	25.000	.000	2.500
R2H077	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	40.000	.000	2.500
R2H007	◇	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H086	△	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	70.000	.000	2.500
R2H096	▽	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	87.200	.000	2.500

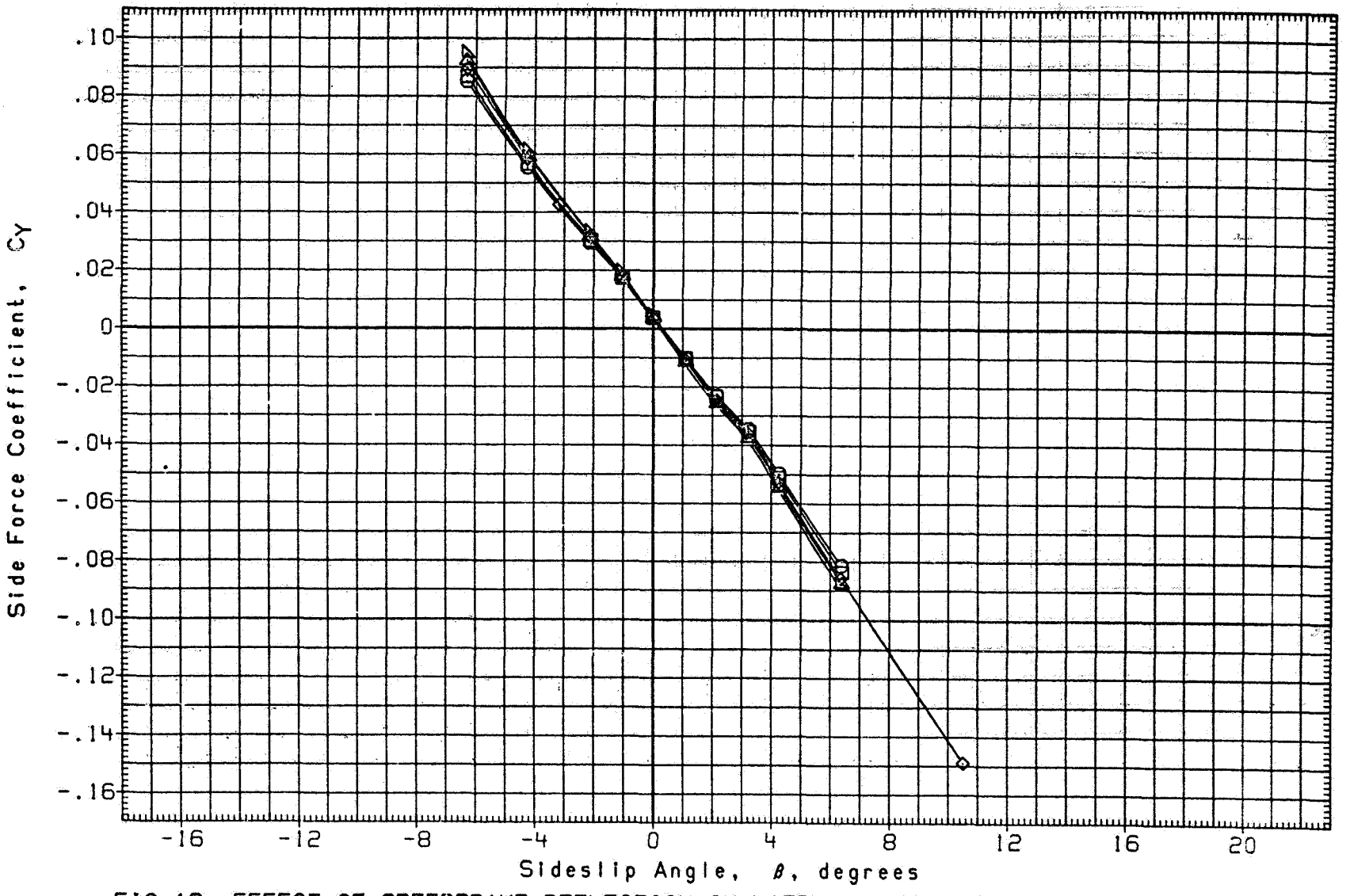


FIG.12 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=15 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H066	○	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	25.000	.000	2.500
R2H077	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	40.000	.000	2.500
R2H007	◇	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H086	△	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	70.000	.000	2.500
R2H096	◁	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	87.200	.000	2.500

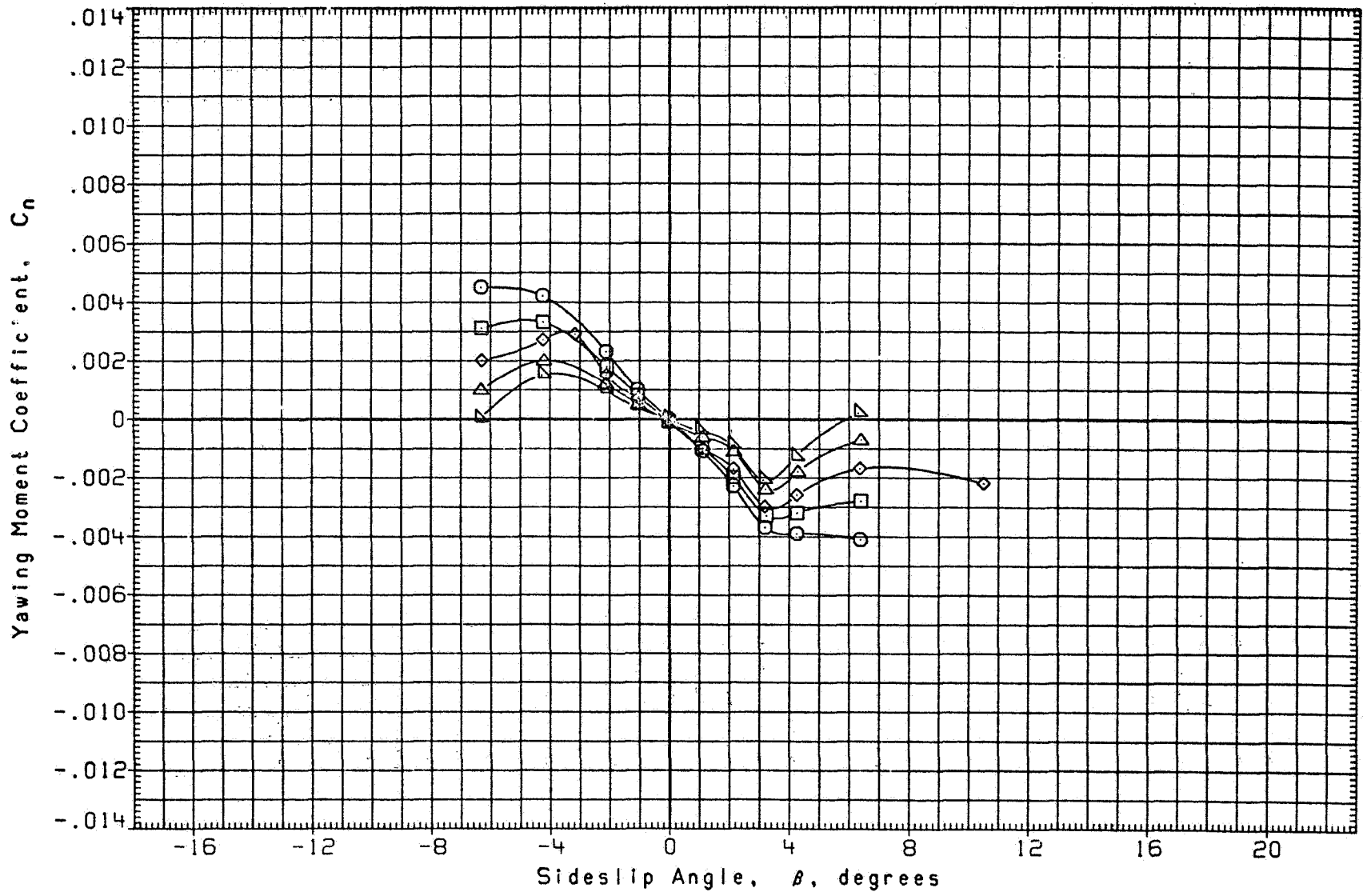


FIG.12 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=15 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H066	○	AMES 118-1-87 0A145C 01	15.000	000	000	.000	25.000	.000	2.500
R2H077	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	40.000	.000	2.500
R2H007	◇	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H086	△	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	70.000	.000	2.500
R2H096	◁	AMES 118-1-87 0A145C 01	15.000	.000	000	000	87.200	.000	2.500

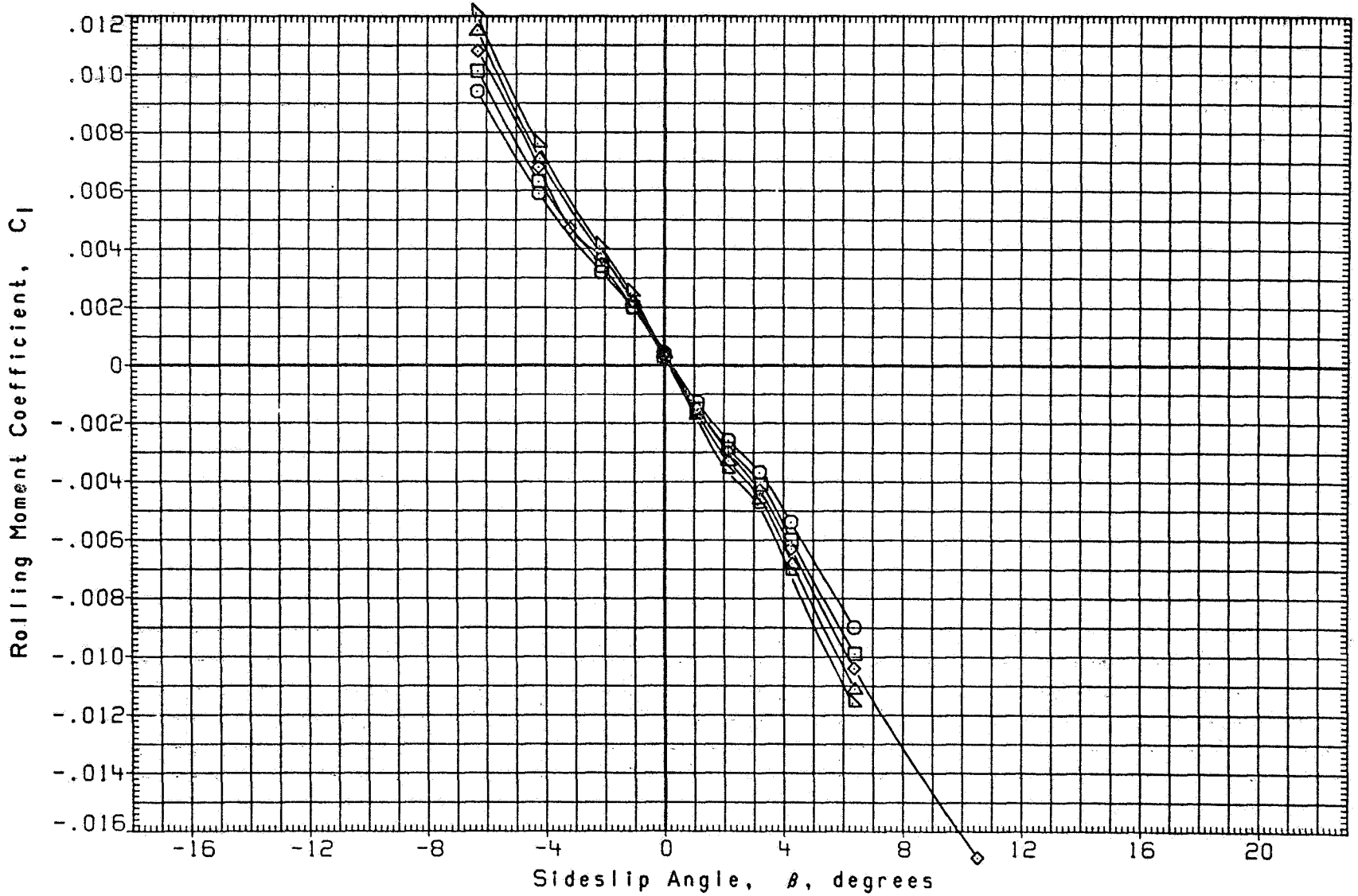


FIG.12 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=15 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H066	○	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	25.000	.000	2.500
G2H007	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	55.000	.000	2.500
G2H096	◇	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	87.200	.000	2.500

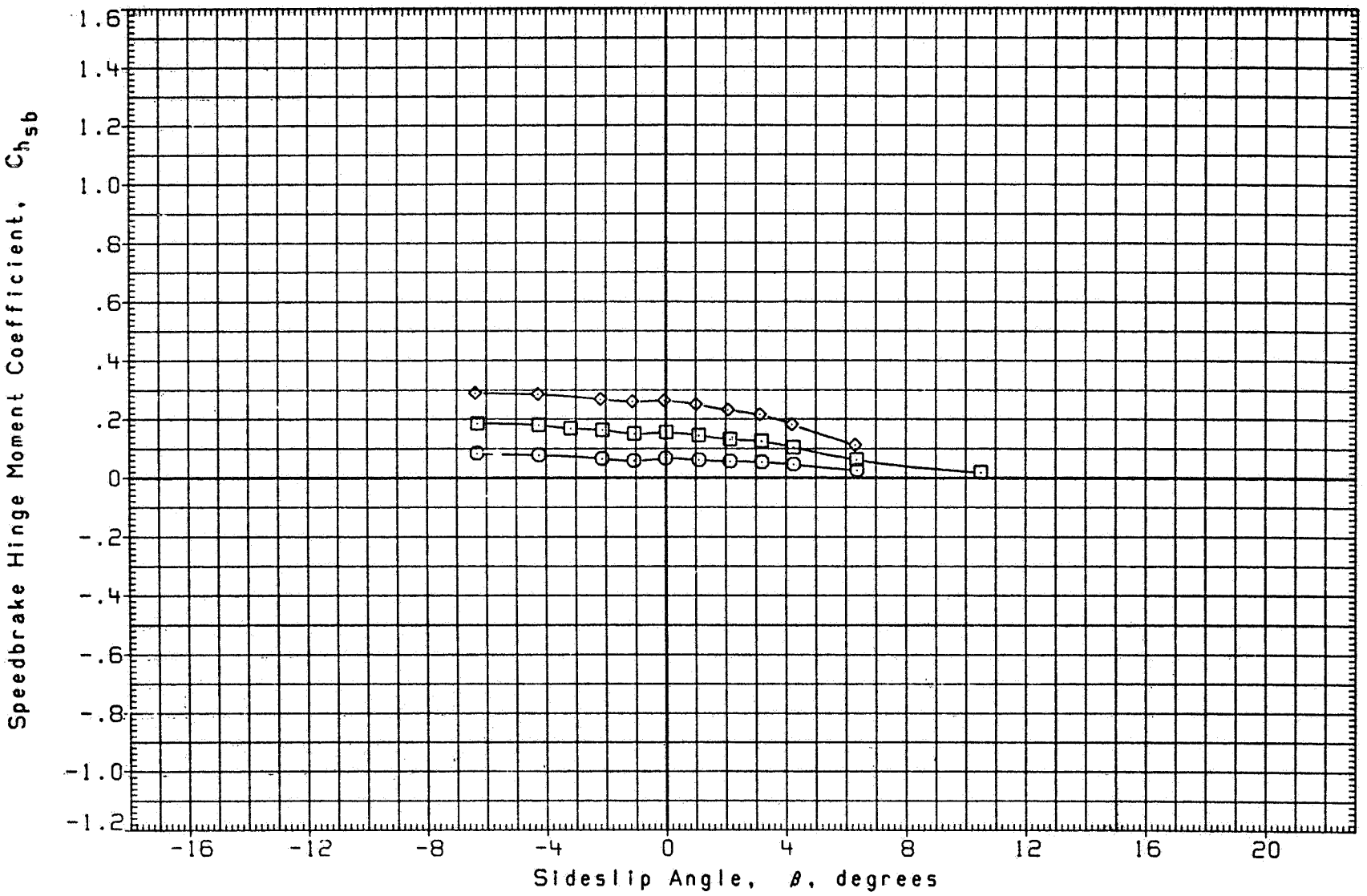


FIG.12 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=15 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H067	○	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	25.000	.000	2.500
R2H010	□	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	55.000	.000	2.500
R2H097	◇	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	87.200	.000	2.500

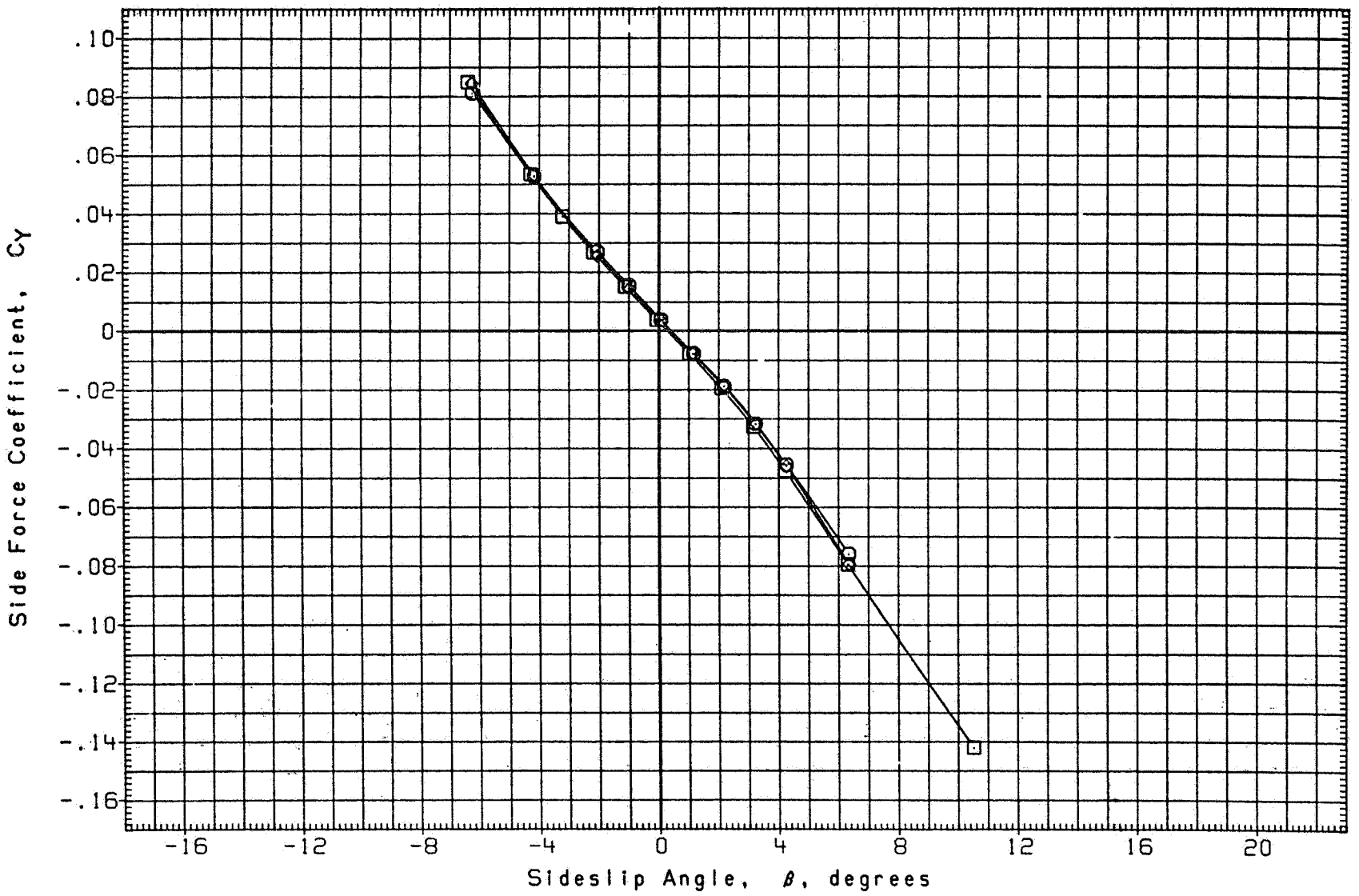


FIG.13 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=20 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
R2H067	○	AMES 118-1-87 OA145C 01
R2H010	□	AMES 118-1-87 OA145C 01
R2H097	◇	AMES 118-1-87 OA145C 01

ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
20.000	.000	.000	.000	25.000	.000	2.500
20.000	.000	.000	.000	55.000	.000	2.500
20.000	.000	.000	.000	87.200	.000	2.500

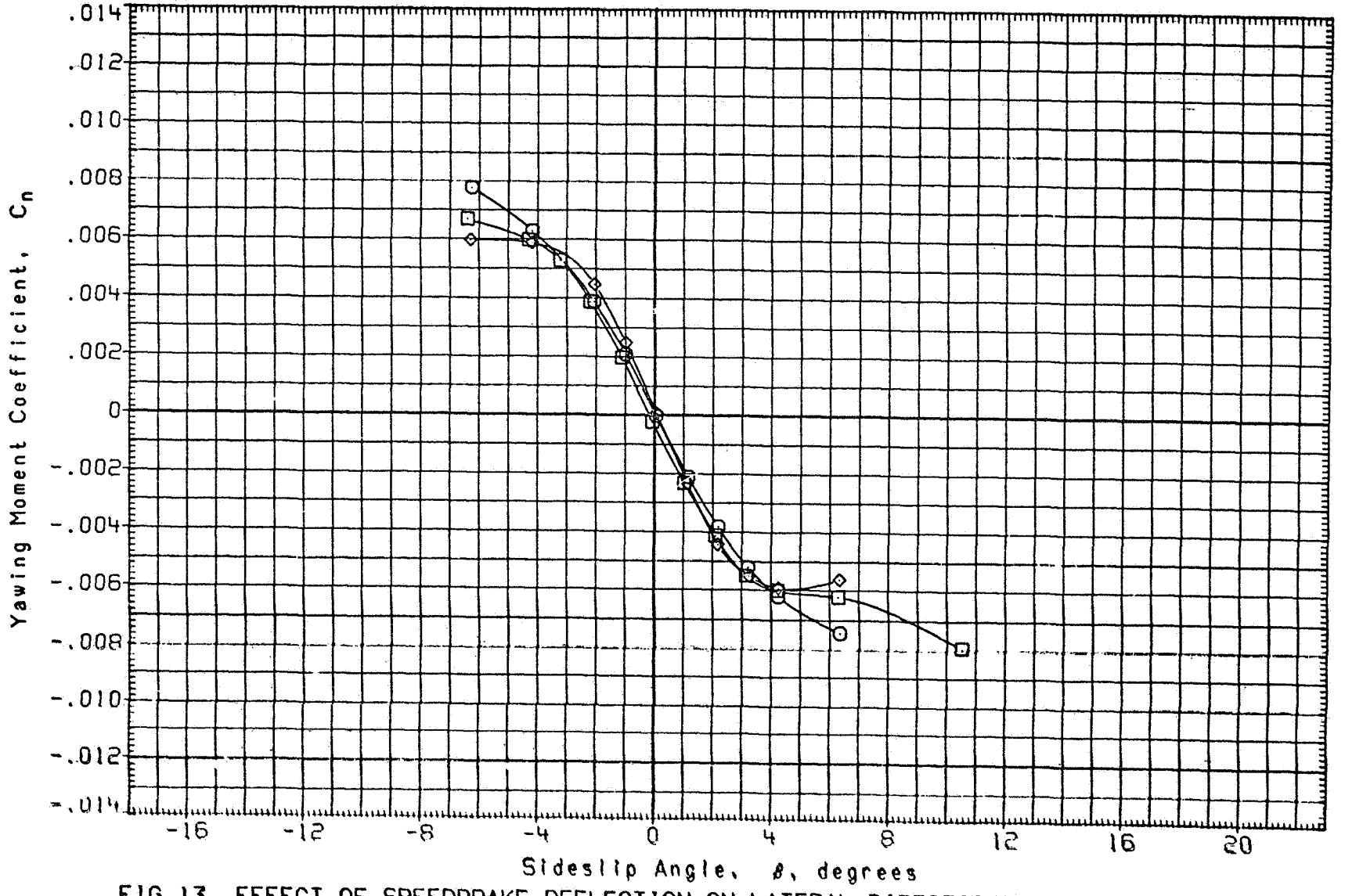


FIG.13 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=20 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
R2H067	○	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	25.000	.000	2.500
R2H010	□	AMES 118-1-87 OA145C 01	20.000	.000	.000	000	55.000	.000	2.500
R2H097	◇	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	87.200	.000	2.500

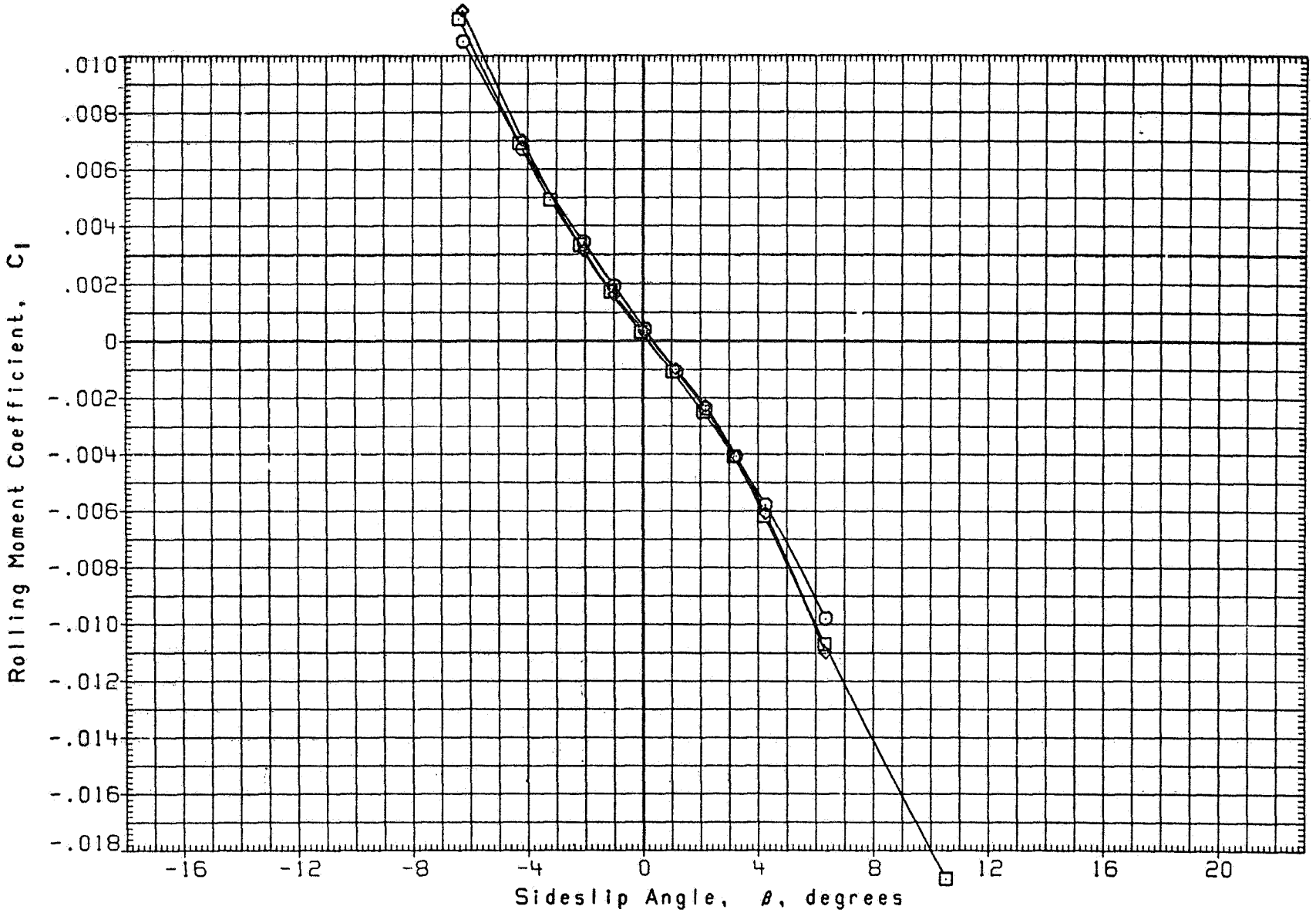


FIG.13 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=20 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	RUDDER	RN/L
G2H010	O	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	55.000	.000	2.500

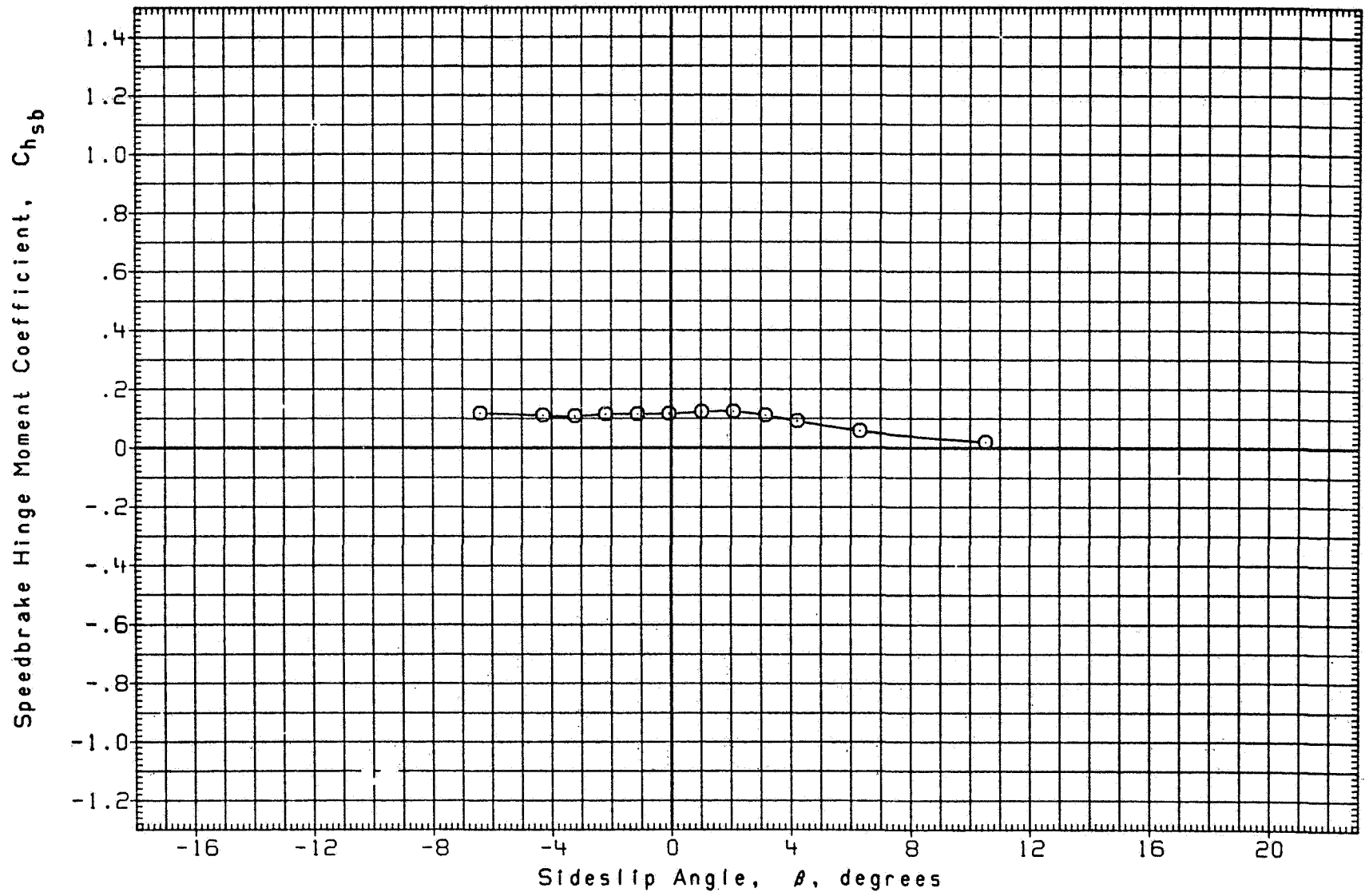


FIG.13 EFFECT OF SPEEDBRAKE DEFLECTION ON LATERAL-DIRECTIONAL DATA, ALPHA=20 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H069	○	AMES 118-1-87 OA145C 01	10.000	.000	.000	.000	25.000	.000	2.500
R2H070	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	25.000	.000	2.500
R2H071	◇	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	25.000	.000	2.500

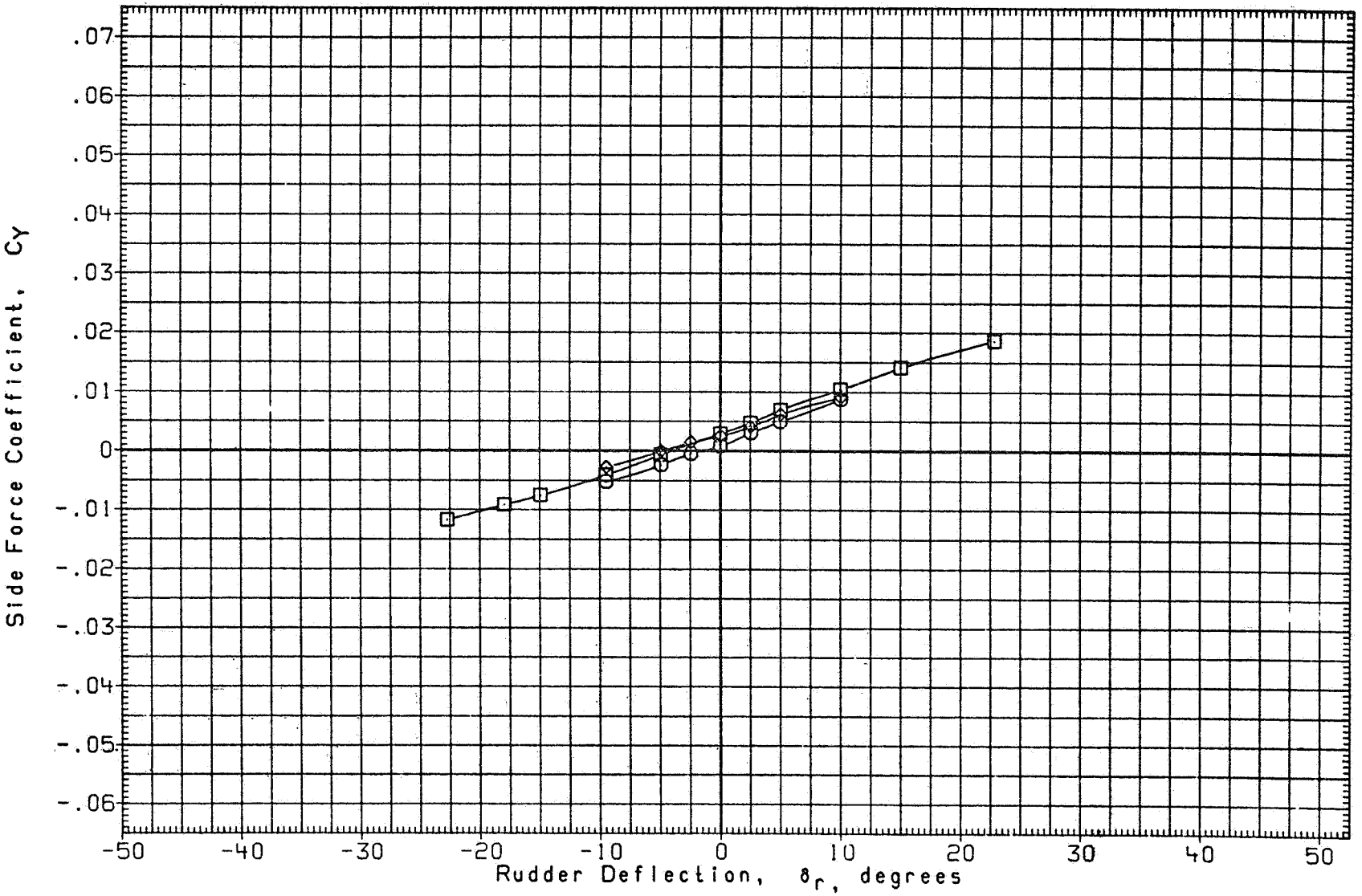


FIG.14 RUDDER EFFECTIVENESS, SPEEDBRAKE=25 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H069	○	AMES 118-1-87 OA145C 01	10.000	.000	000	.000	25.000	.000	2.500
R2H070	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	25.000	.000	2.500
R2H071	◇	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	25.000	.000	2.500

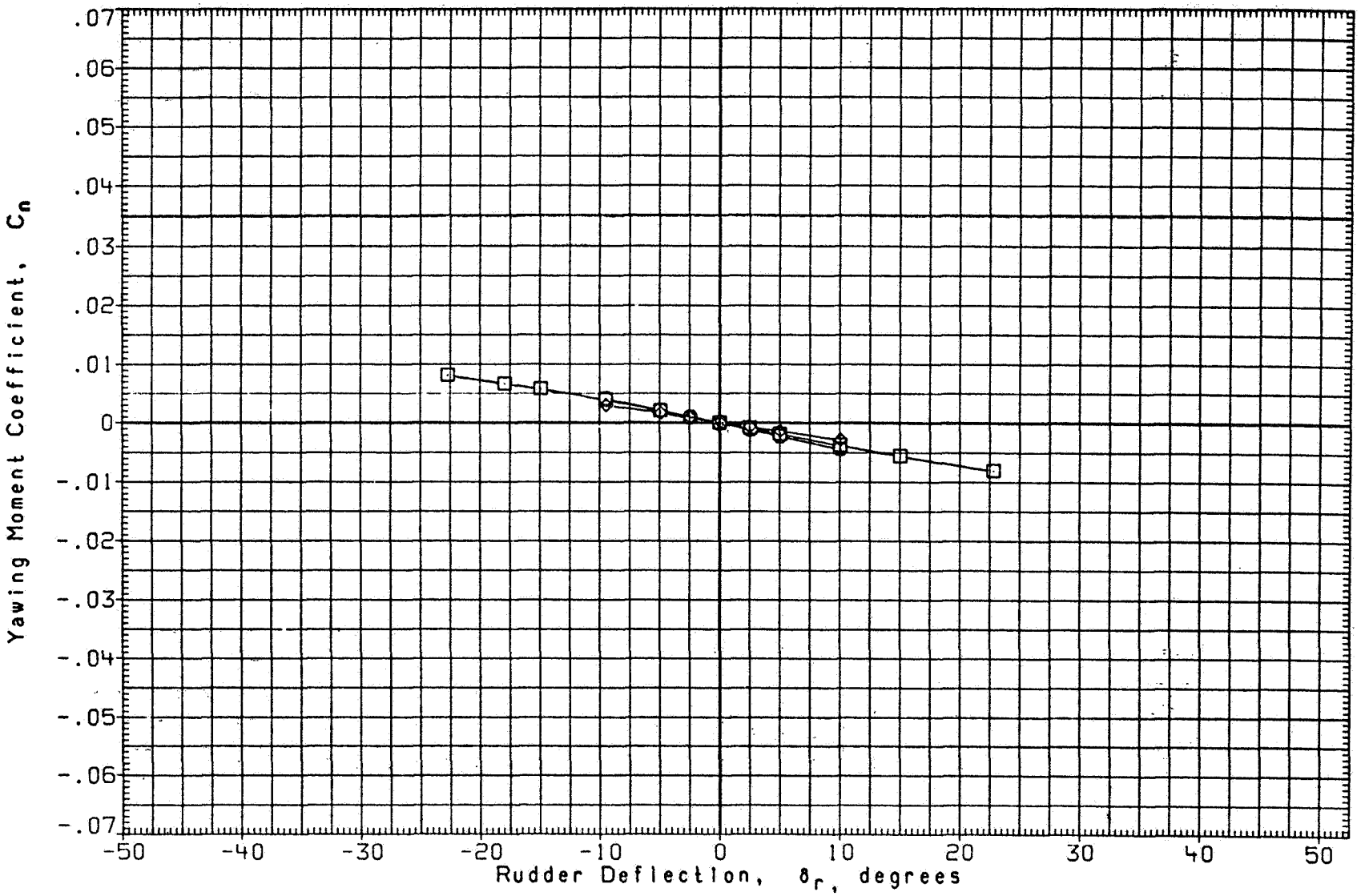


FIG.14 RUDDER EFFECTIVENESS, SPEEDBRAKE=25 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H069	○	AMES 118-1-87 OA145C 01	10.000	.000	000	.000	25.000	.000	2.500
R2H070	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	25.000	.000	2.500
R2H071	◇	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	25.000	.000	2.500

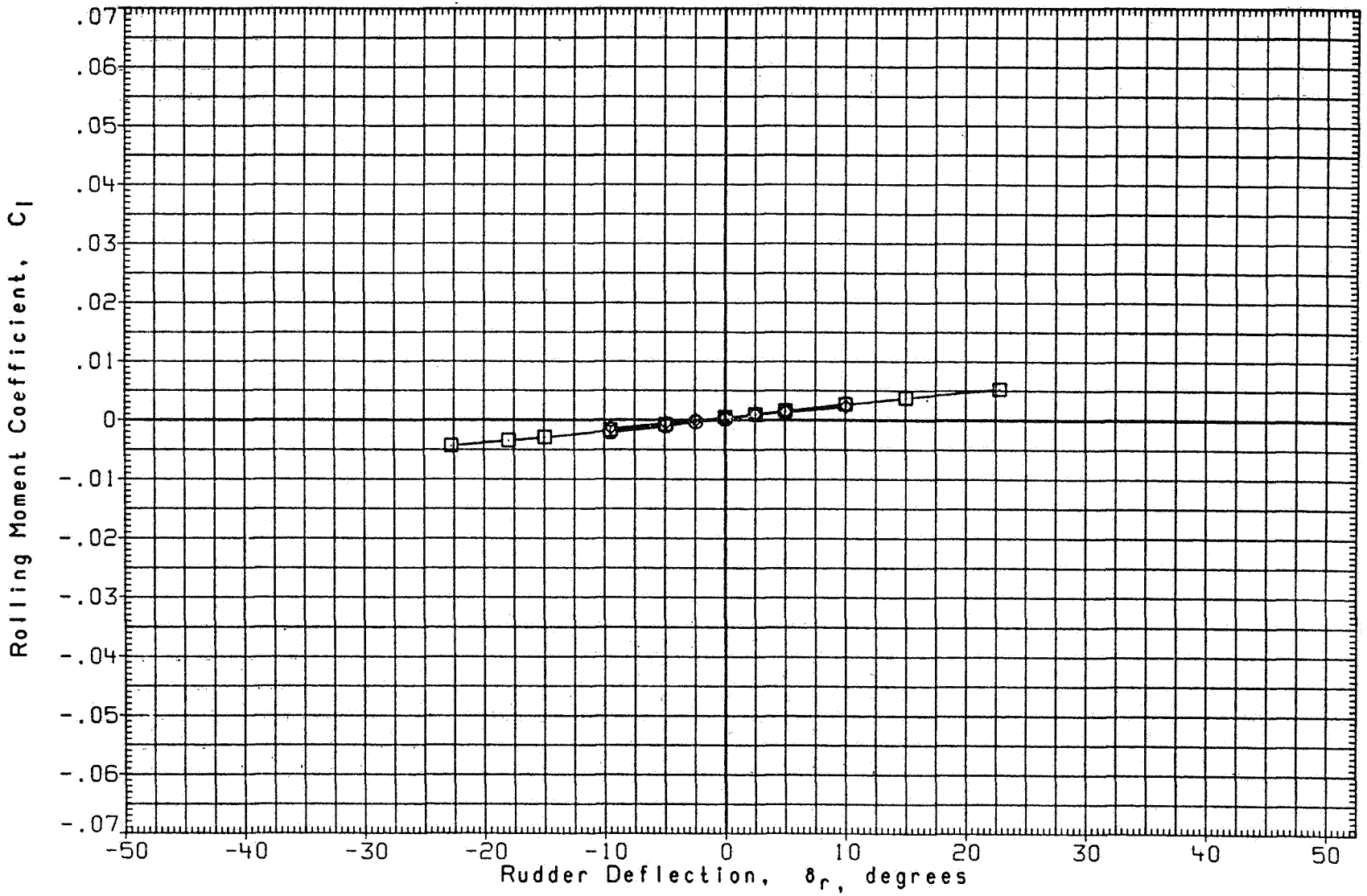


FIG.14 RUDDER EFFECTIVENESS, SPEEDBRAKE=25 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
G2H069	○	AMES 118-1-87 OA145C 01	10.000	.000	.000	.000	25.000	.000	2.500
G2H070	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	25.000	.000	2.500
G2H071	◇	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	25.000	.000	2.500

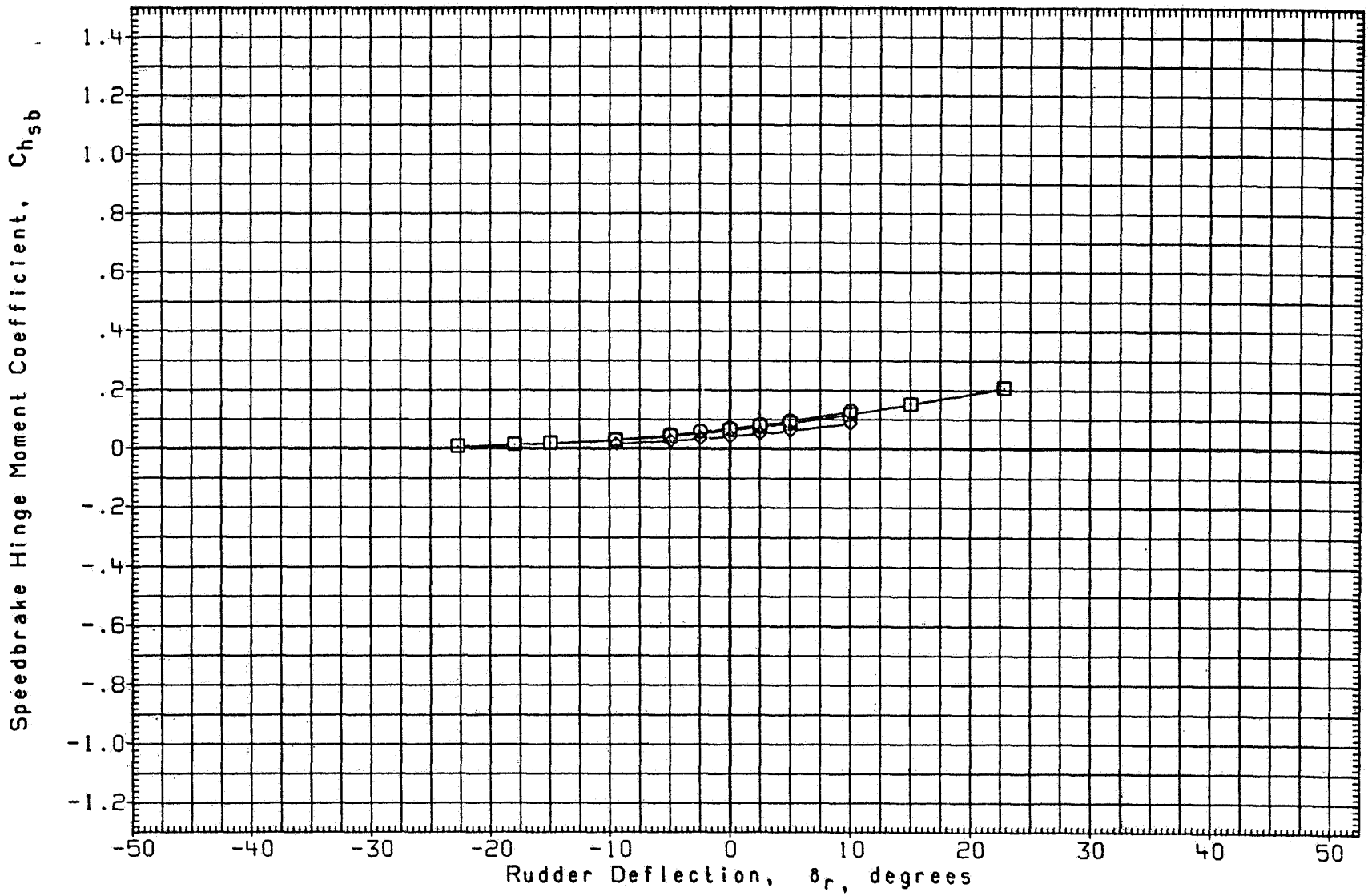


FIG.14 RUDDER EFFECTIVENESS, SPEEDBRAKE=25 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H079	○	AMES 118-1-87 0A145C 01	10.000	.000	000	.000	40.000	.000	2.500
R2H080	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	40.000	.000	2.500
R2H081	◇	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	40.000	.000	2.500

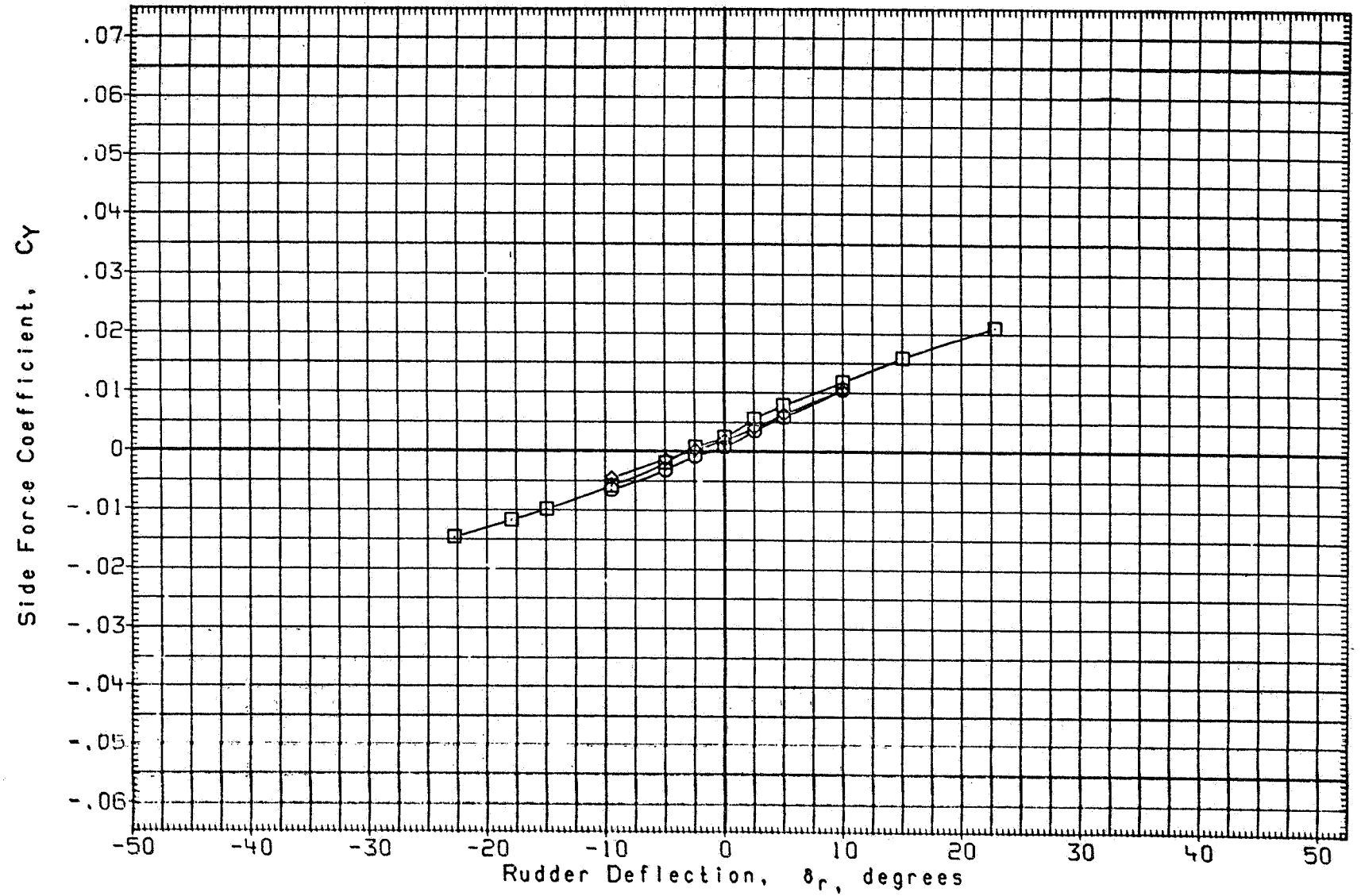


FIG.15 RUDDER EFFECTIVENESS, SPEEDBRAKE=40 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H079	○	AMES 118-1-87 OA145C 01	10.000	.000	.000	.000	40.000	.000	2.500
R2H080	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	40.000	.000	2.500
R2H081	◇	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	40.000	.000	2.500

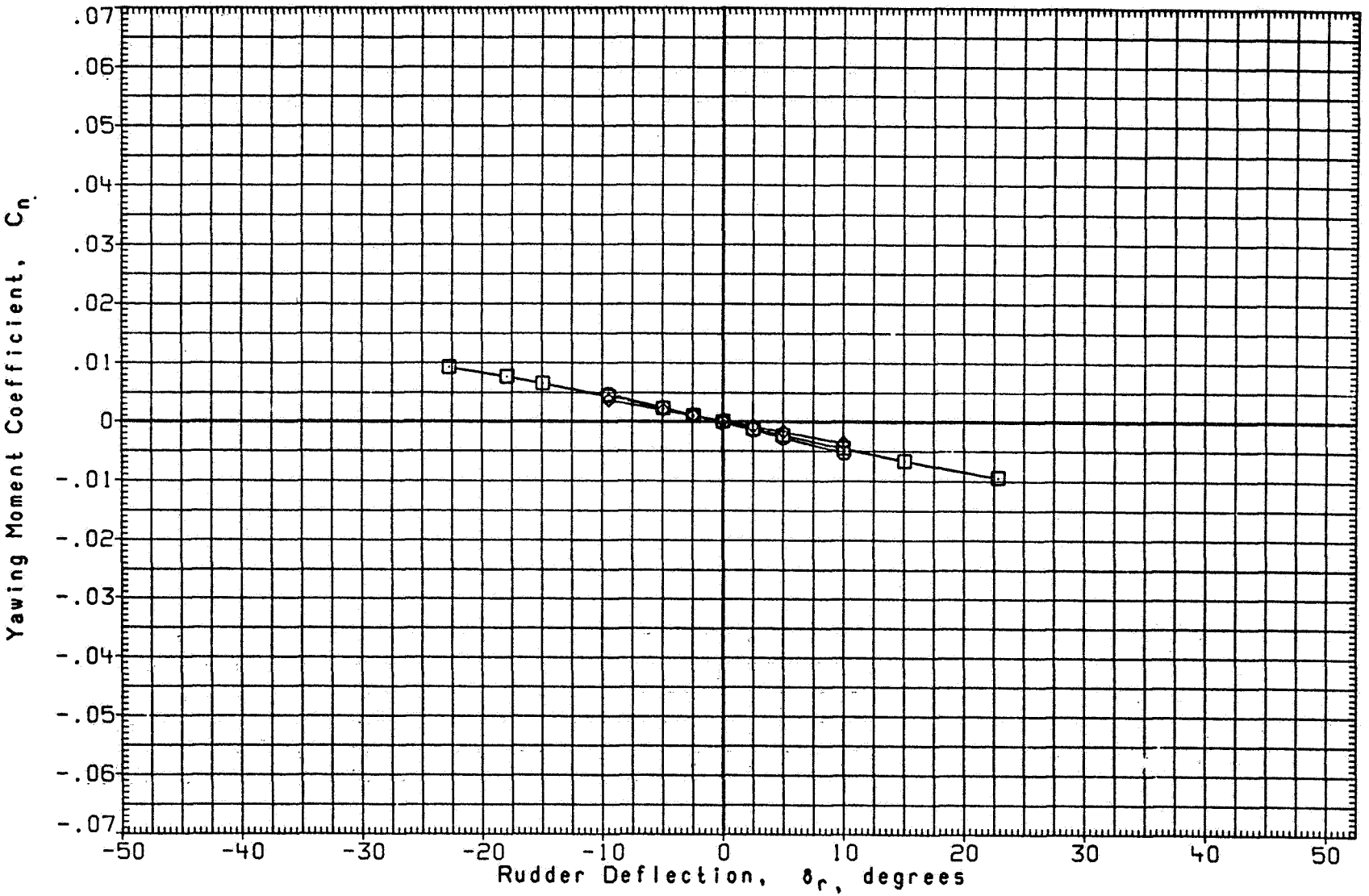


FIG.15 RUDDER EFFECTIVENESS, SPEEDBRAKE=40 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H079	○	AMES 118-1-87 OA145C 01	10.000	.000	.000	.000	40.000	.000	2.500
R2H080	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	40.000	.000	2.500
R2H081	◇	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	40.000	.000	2.500

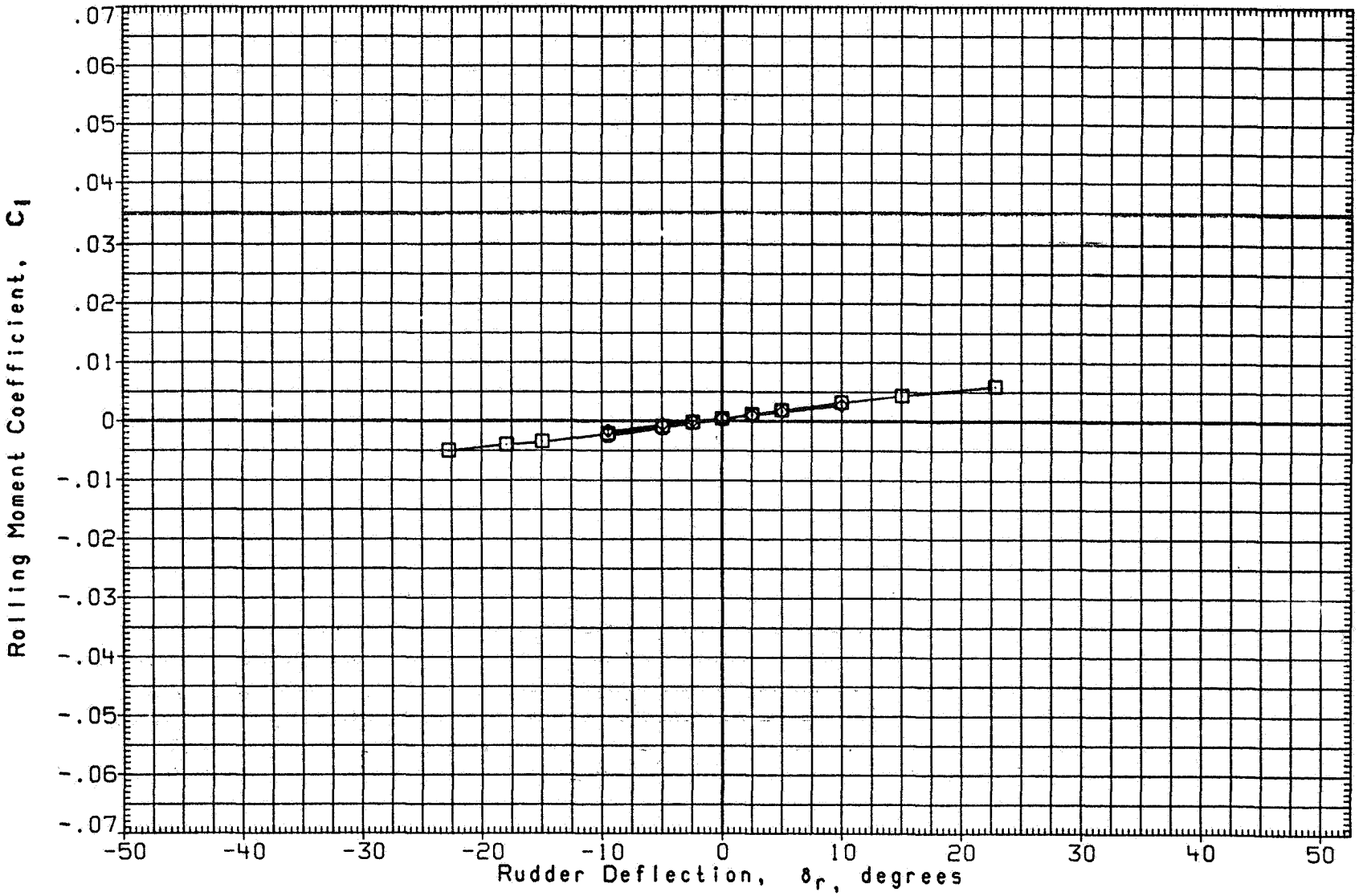


FIG.15 RUDDER EFFECTIVENESS, SPEEDBRAKE=40 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
G2H080	O	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	40.000	.000	2.500

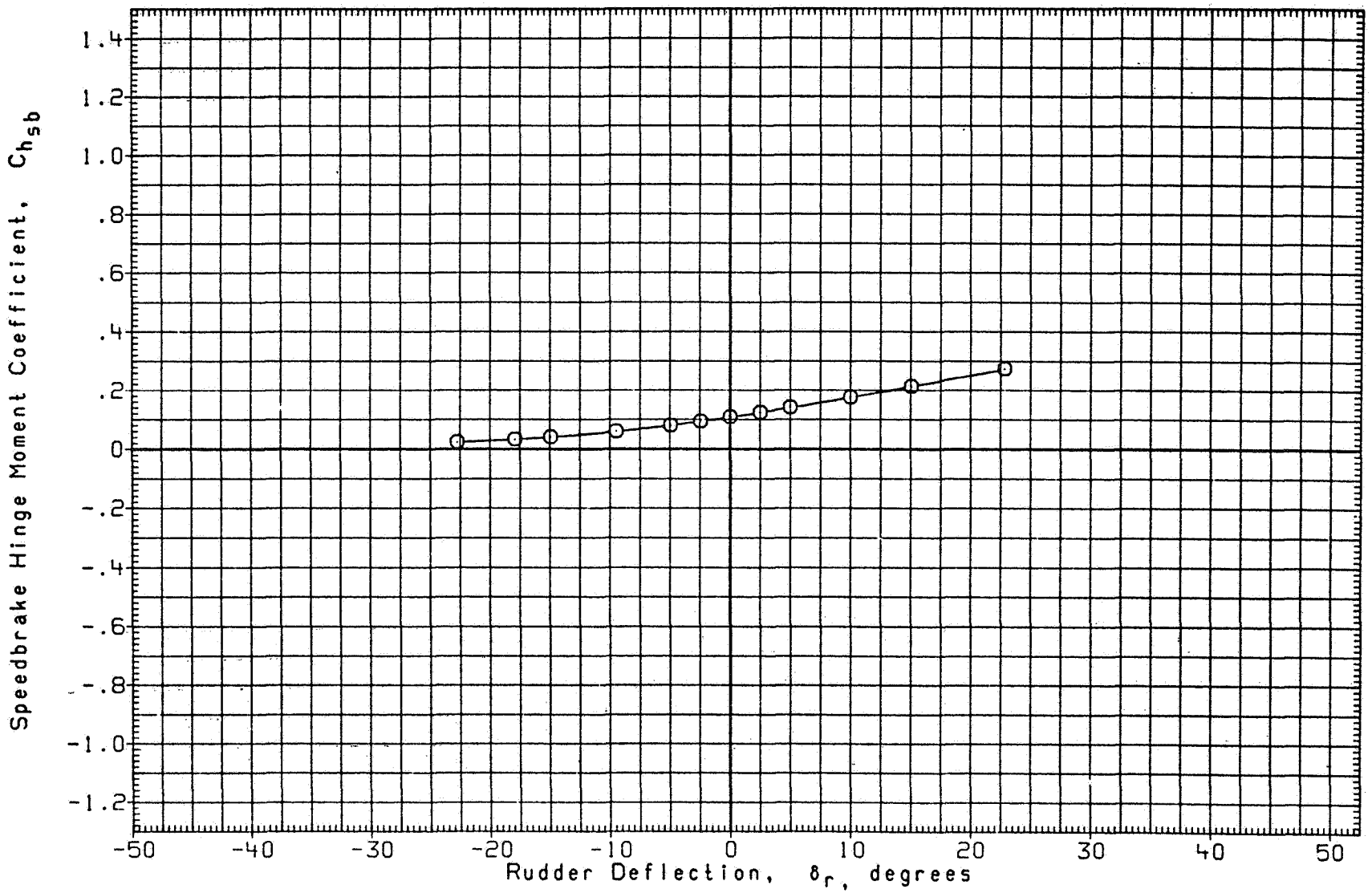


FIG.15 RUDDER EFFECTIVENESS, SPEEDBRAKE=40 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H048	○	AMES 118-1-87 OA145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H049	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H050	◇	AMES 118-1-87 OA145C 01	20.000	.000	.000	.000	55.000	.000	2.500

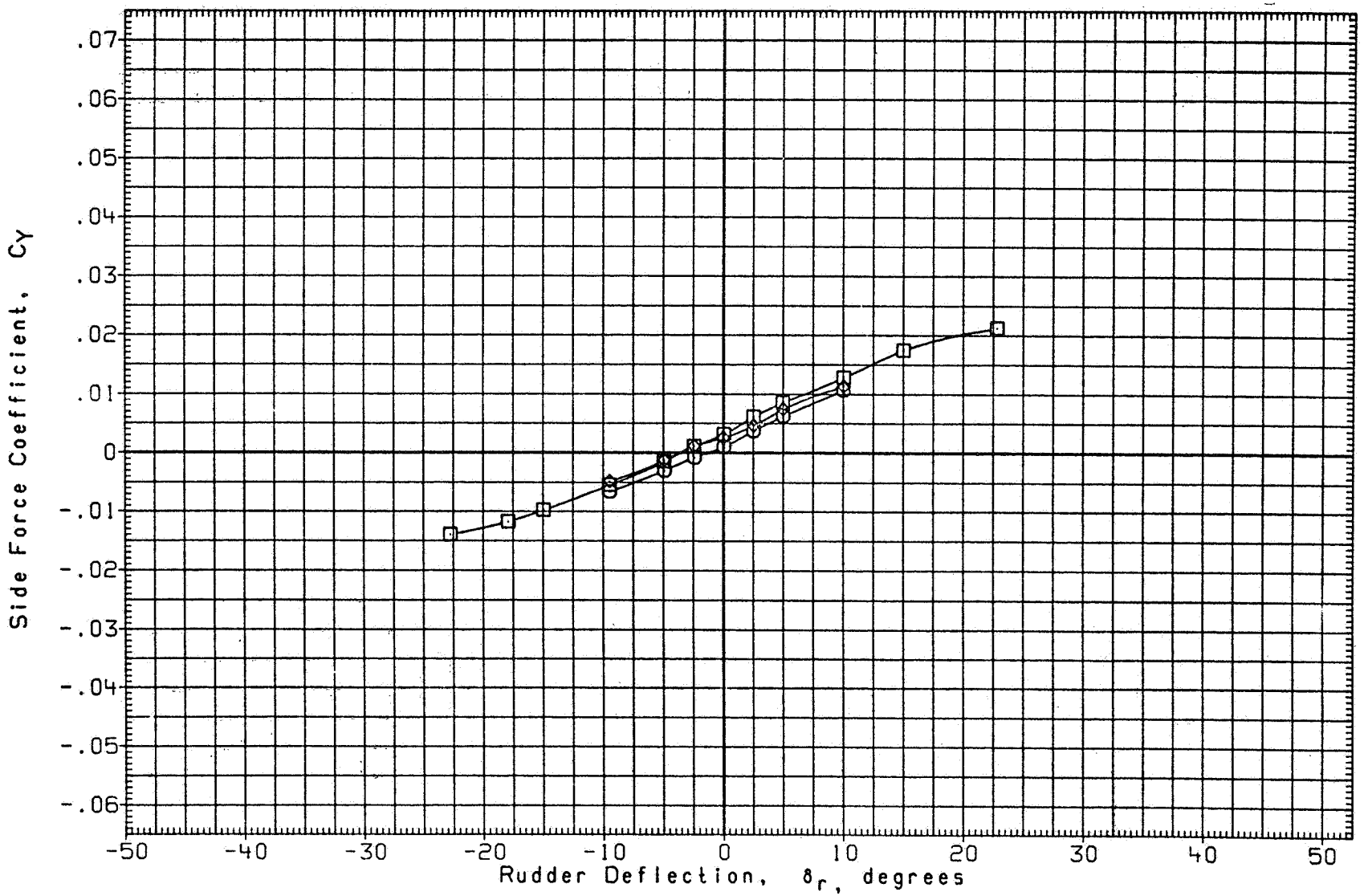


FIG.16 RUDDER EFFECTIVENESS, SPEEDBRAKE=55 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H048	○	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	55.000	.000	2.500
R2H049	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	2.500
R2H050	◇	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	55.000	.000	2.500

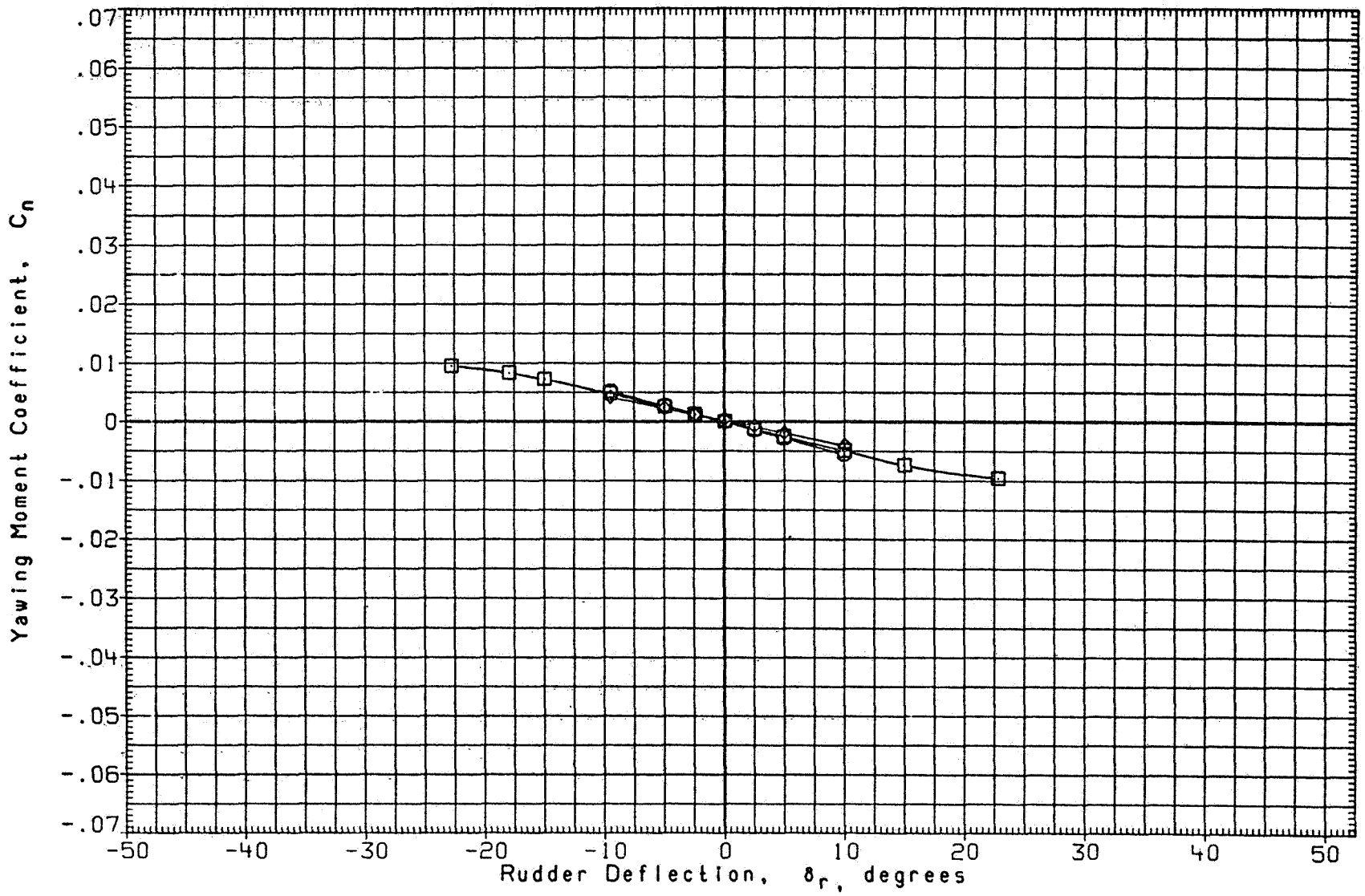


FIG.16 RUDDER EFFECTIVENESS, SPEEDBRAKE=55 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
R2H048	○	AMES 118-1-87 OA145C 01
R2H049	□	AMES 118-1-87 OA145C 01
R2H050	◇	AMES 118-1-87 OA145C 01

ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
10.000	.000	.000	.000	55.000	.000	2.500
15.000	.000	.000	.000	55.000	.000	2.500
20.000	.000	.000	.000	55.000	.000	2.500

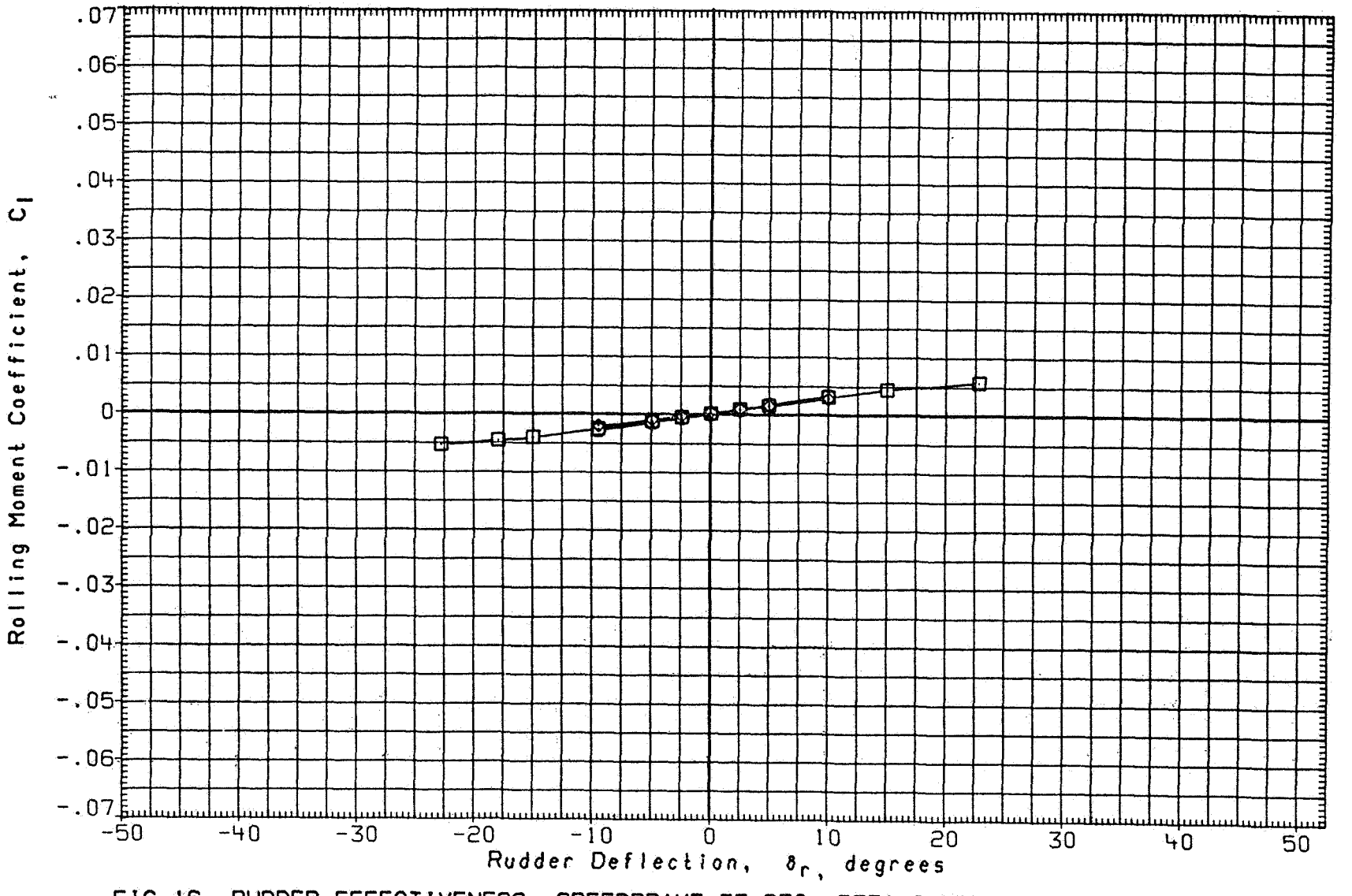


FIG.16 RUDDER EFFECTIVENESS, SPEEDBRAKE=55 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
G2H048	○	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	55.000	.000	2.500
G2H049	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	55.000	.000	2.500
G2H050	◇	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	55.000	.000	2.500

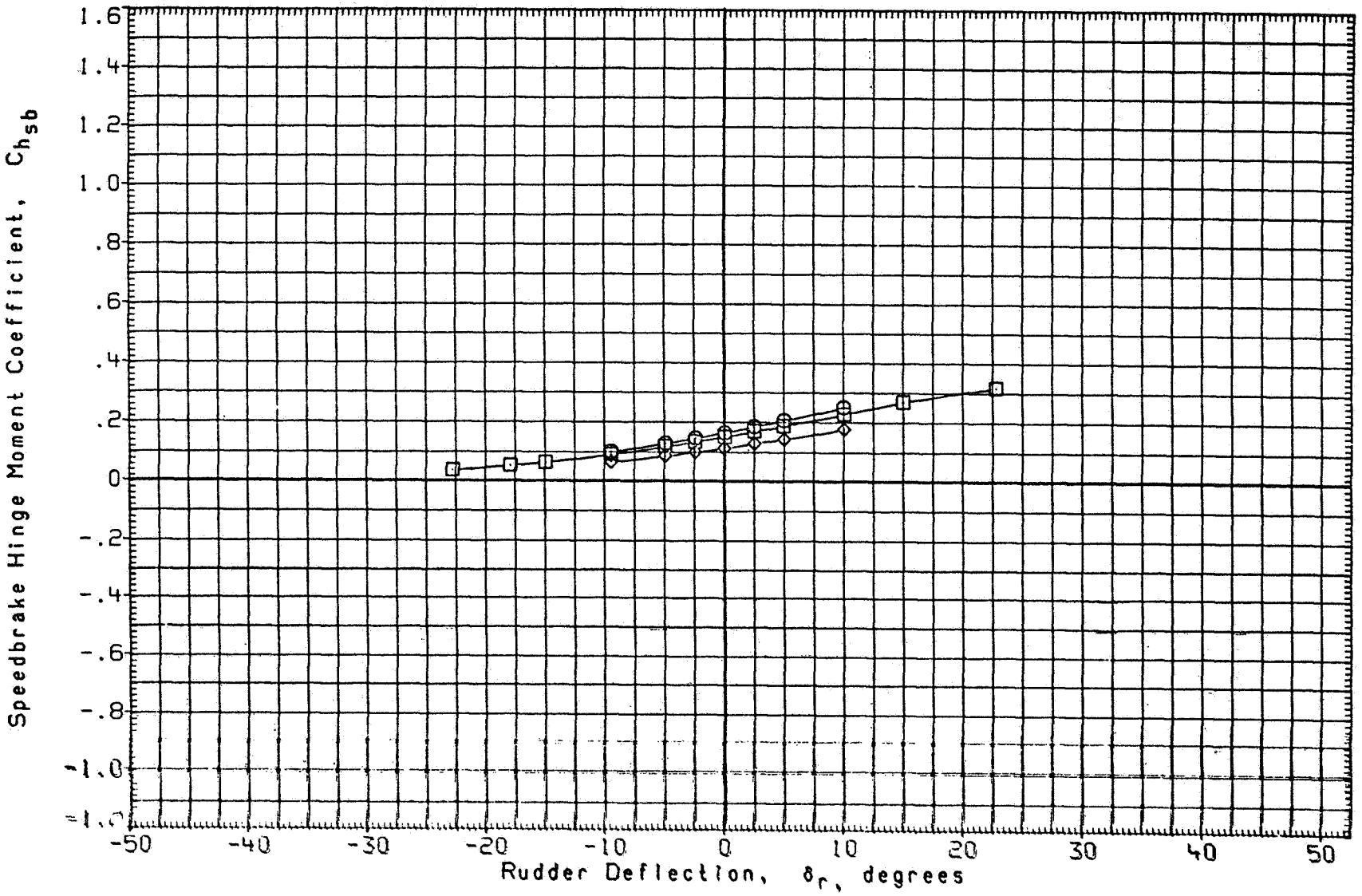


FIG.16 RUDDER EFFECTIVENESS, SPEEDBRAKE=55 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H088	○	AMES 118-1-87 0A145C 01	10.000	.000	000	.000	70.000	.000	2.500
R2H089	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	70.000	.000	2.500
R2H090	◇	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	70.000	.000	2.500

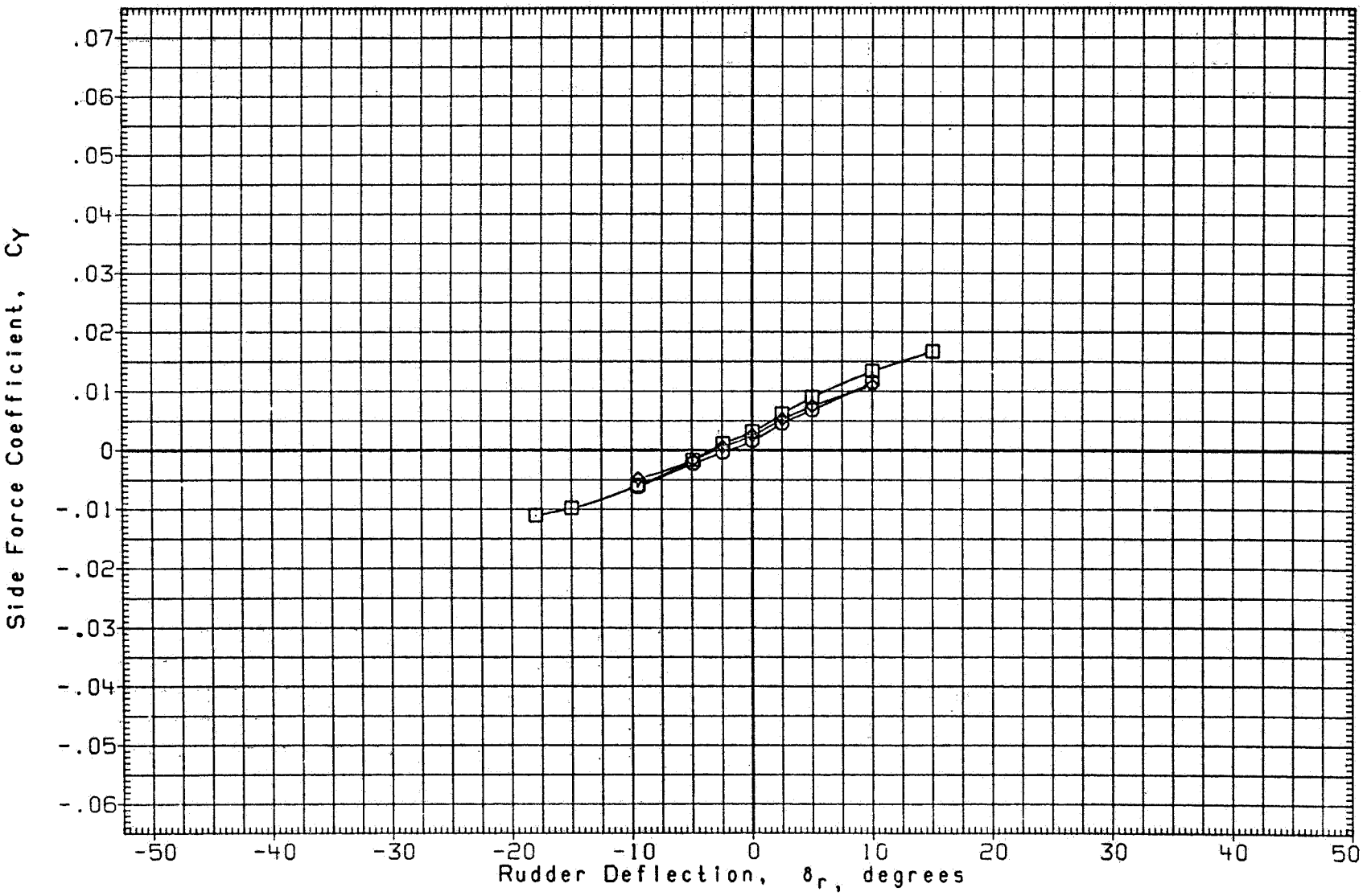


FIG.17 RUDDER EFFECTIVENESS, SPEEDBRAKE=70 DEG, BETA=0 DEG

( )MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H088	○	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	70.000	.000	2.500
R2H089	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	70.000	.000	2.500
R2H090	◇	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	70.000	.000	2.500

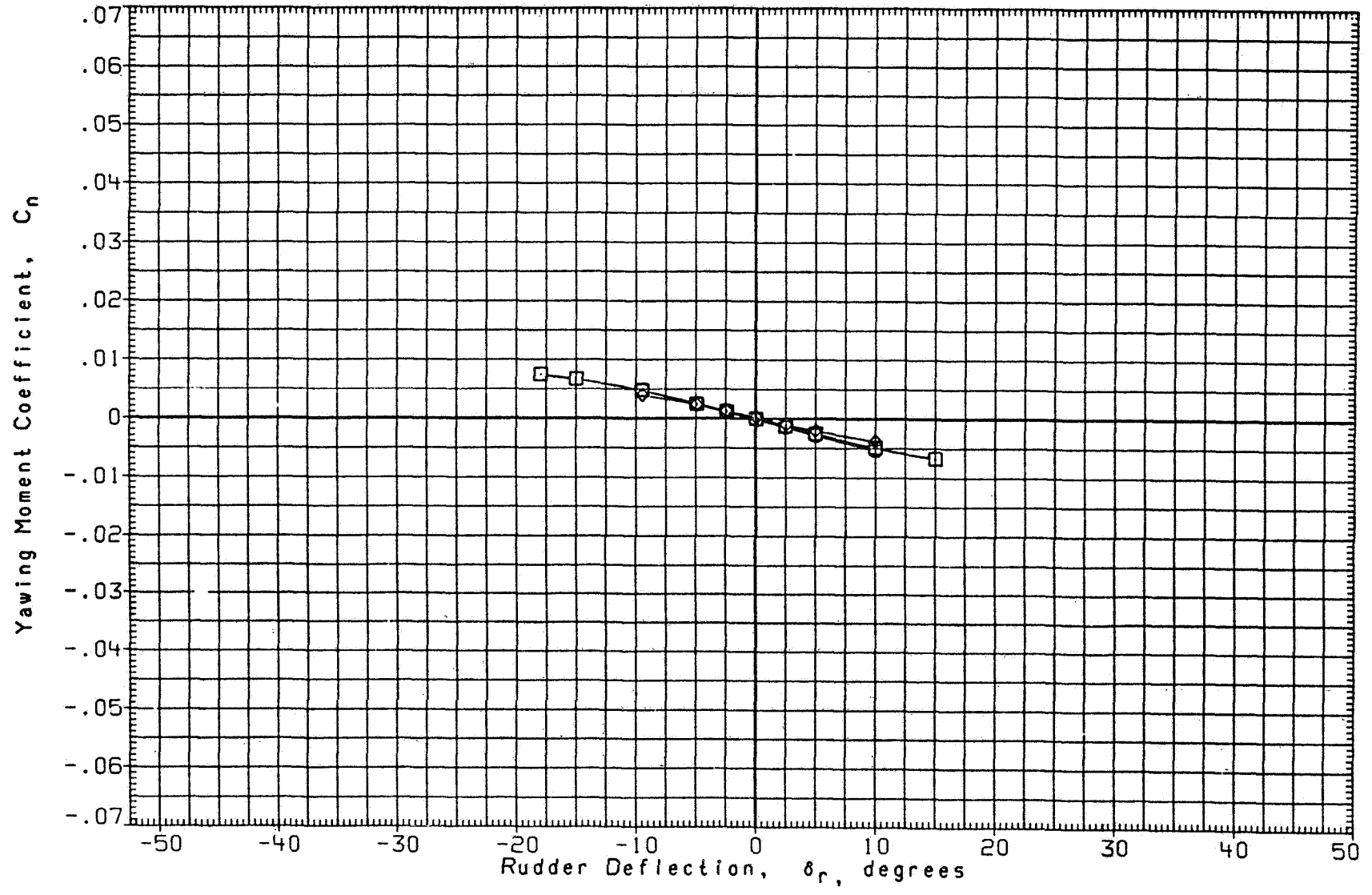


FIG.17 RUDDER EFFECTIVENESS, SPEEDBRAKE=70 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H088	○	AMES 118-1-87 0A145C 01	10.000	.000	000	.000	70.000	.000	2.500
R2H089	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	70.000	000	2.500
R2H090	◇	AMES 118-1-87 0A145C 01	20.000	000	.000	.000	70.000	.000	2.500

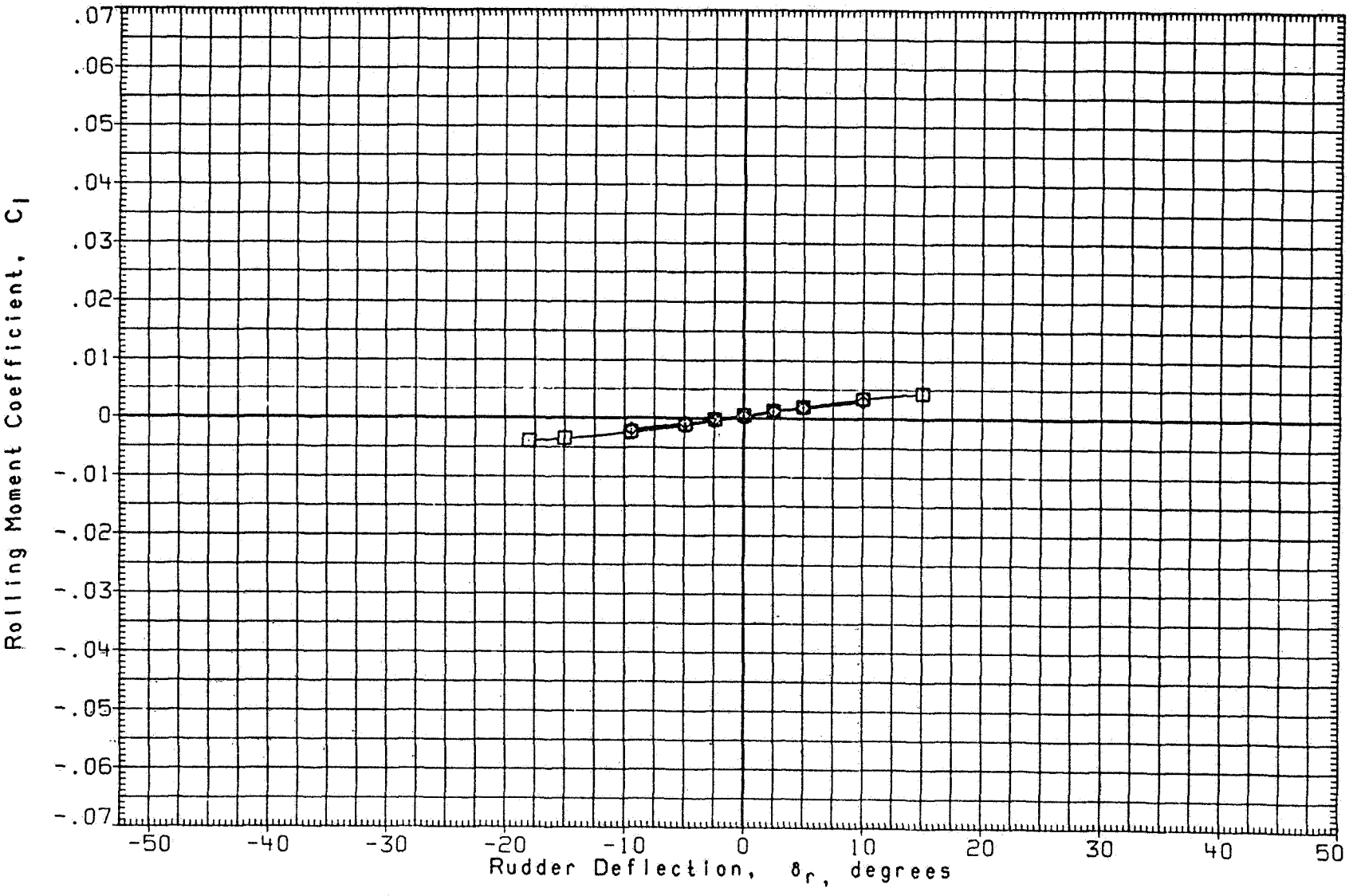


FIG.17 RUDDER EFFECTIVENESS, SPEEDBRAKE=70 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
G2H089	O	AMES 118-1-87 0A145C 01	15.000	.000	000	.000	70.000	.000	2.500

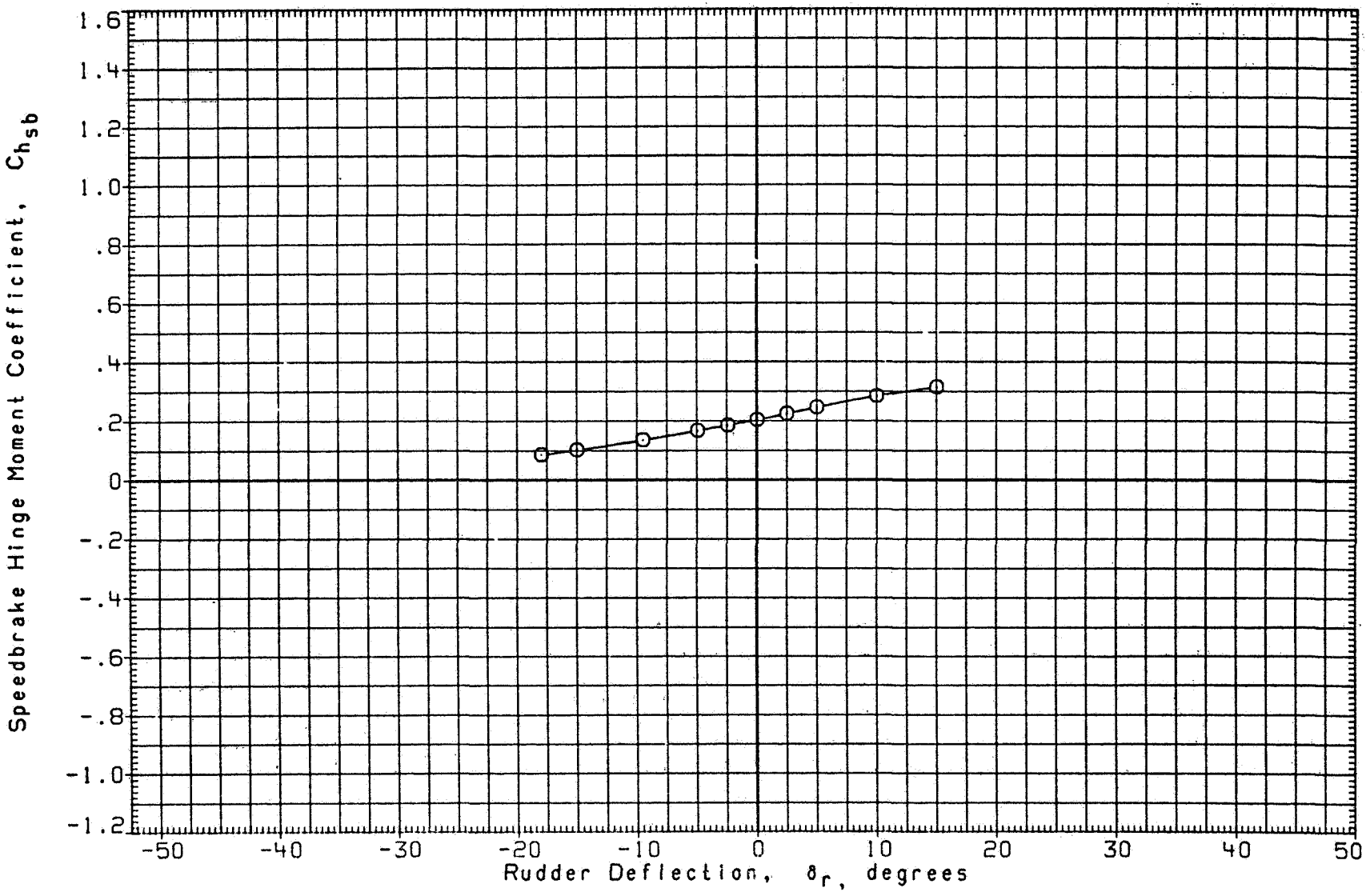


FIG.17 RUDDER EFFECTIVENESS, SPEEDBRAKE=70 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H099	○	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	87.200	.000	2.500
R2H0A0	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	87.200	.000	2.500
R2H0A1	◇	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	87.200	.000	2.500

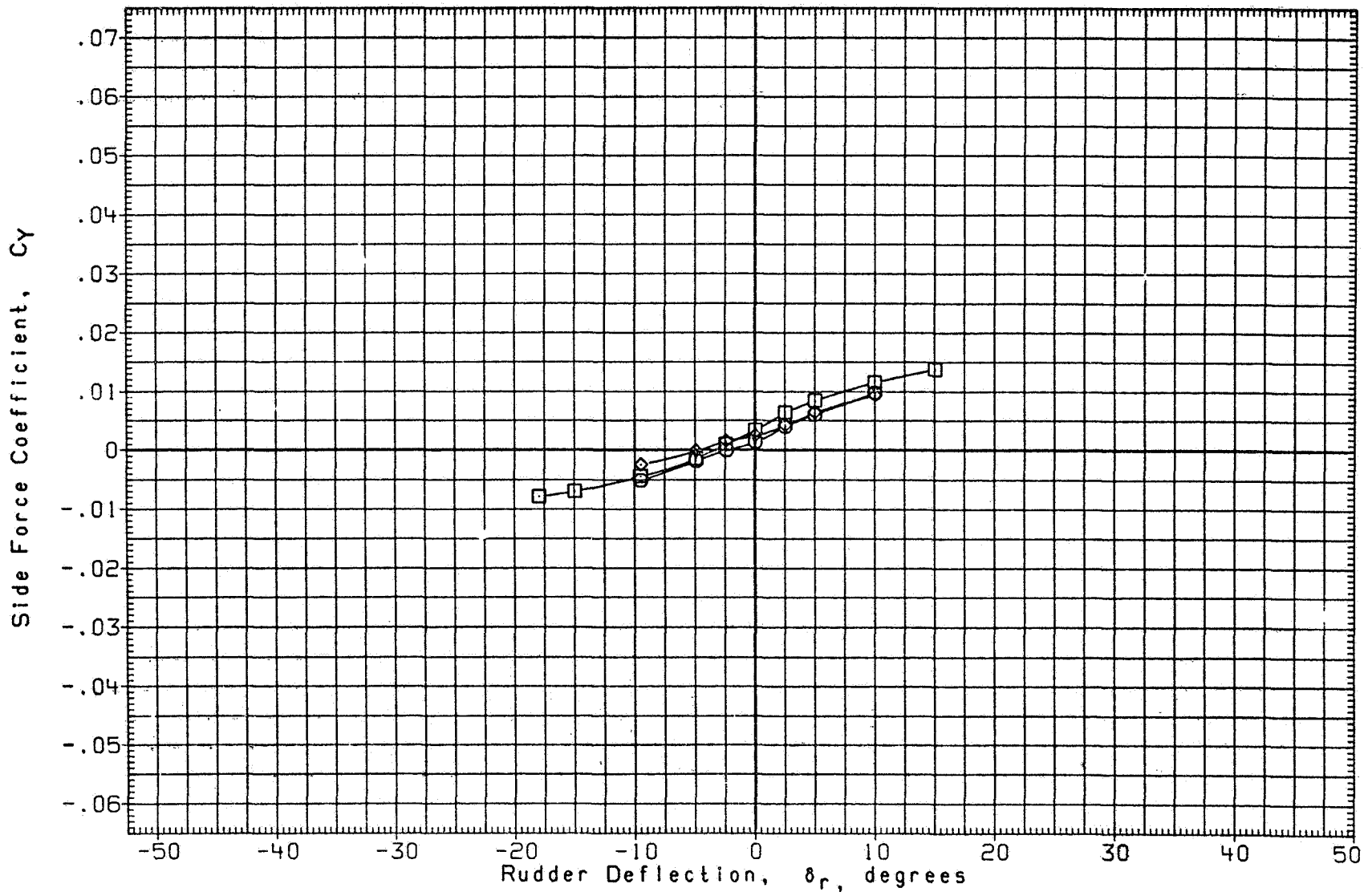


FIG.18 RUDDER EFFECTIVENESS, SPEEDBRAKE=87.2 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H099	○	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	87.200	.000	2.500
R2H0A0	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	87.200	.000	2.500
R2H0A1	◇	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	87.200	.000	2.500

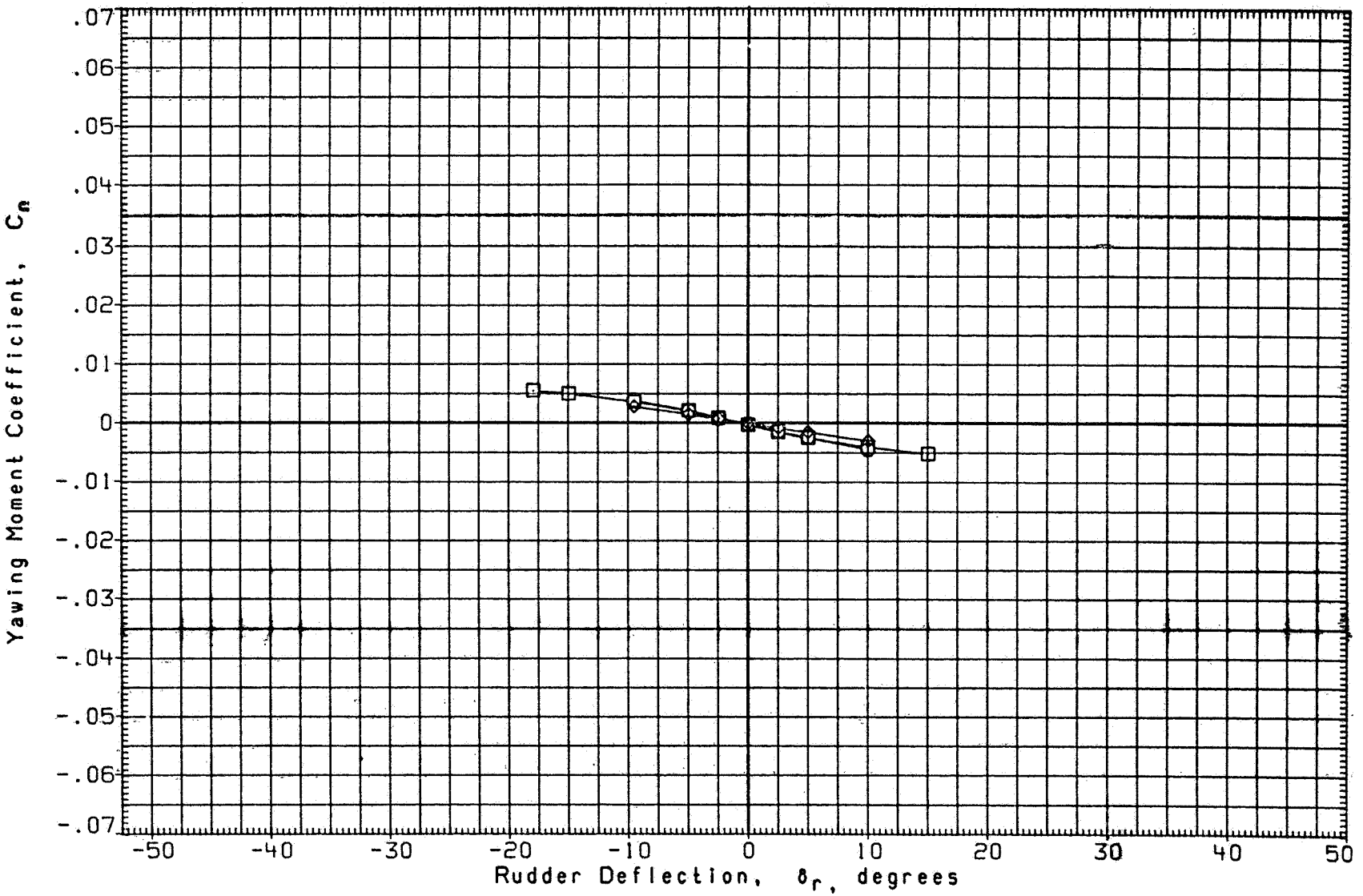


FIG.18 RUDDER EFFECTIVENESS, SPEEDBRAKE=87.2 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
R2H099	○	AMES 118-1-87 0A145C 01	10.000	.000	.000	.000	87.200	.000	2.500
R2H0A0	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	87.200	.000	2.500
R2H0A1	◇	AMES 118-1-87 0A145C 01	20.000	.000	.000	.000	87.200	000	2.500

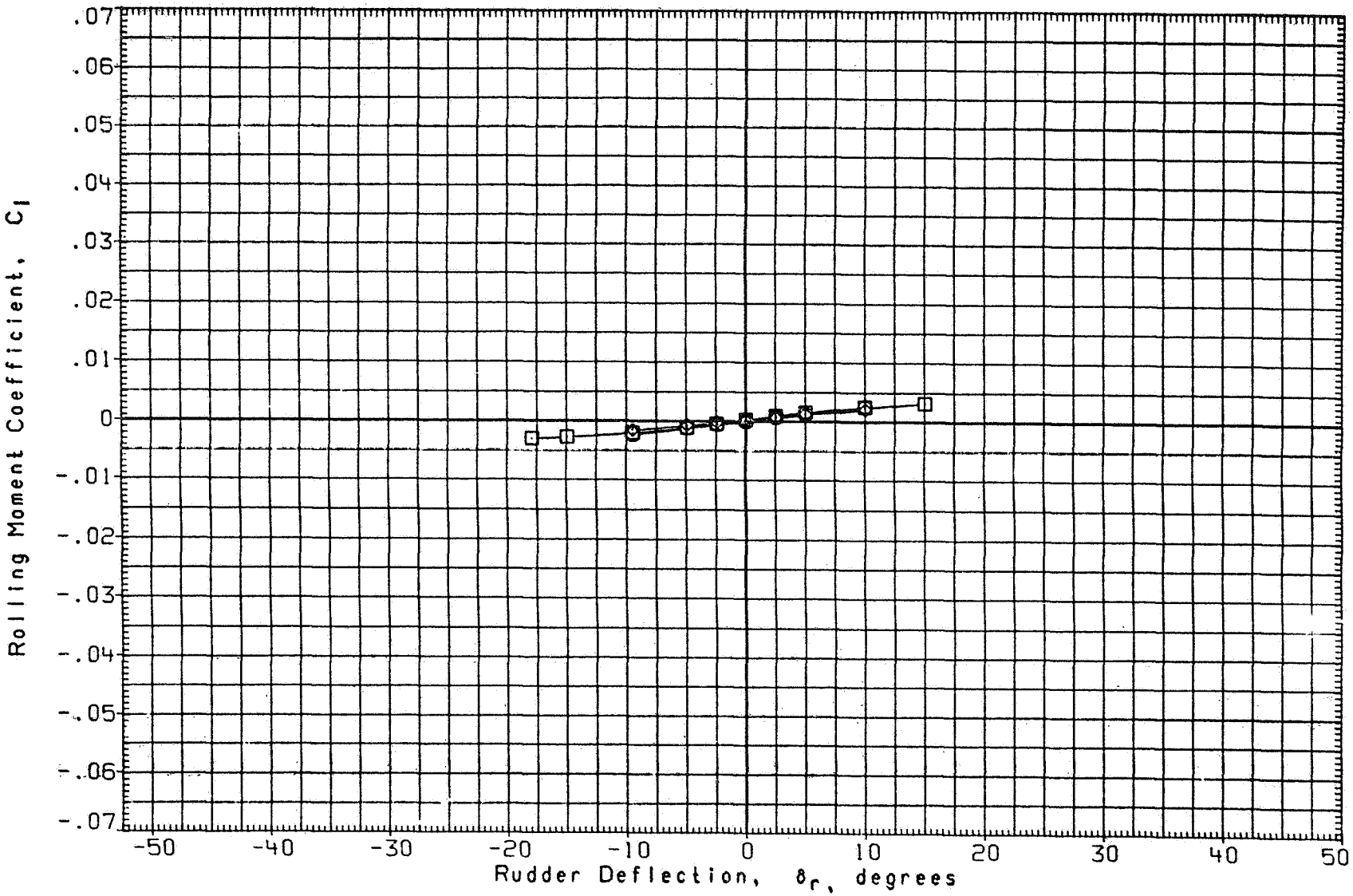


FIG.18 RUDDER EFFECTIVENESS, SPEEDBRAKE=87.2 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	ELEVON	AILRON	BDFLAP	SPDBRK	BETA	RN/L
G2H099	○	AMES 118-1-87 0A145C 01	10.000	.000	000	.000	87.200	.000	2.500
G2H0A0	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	.000	87.200	000	2.500
G2H0A1	◇	AMES 118-1-87 0A145C 01	20.000	.000	.000	000	87.200	.000	2.500

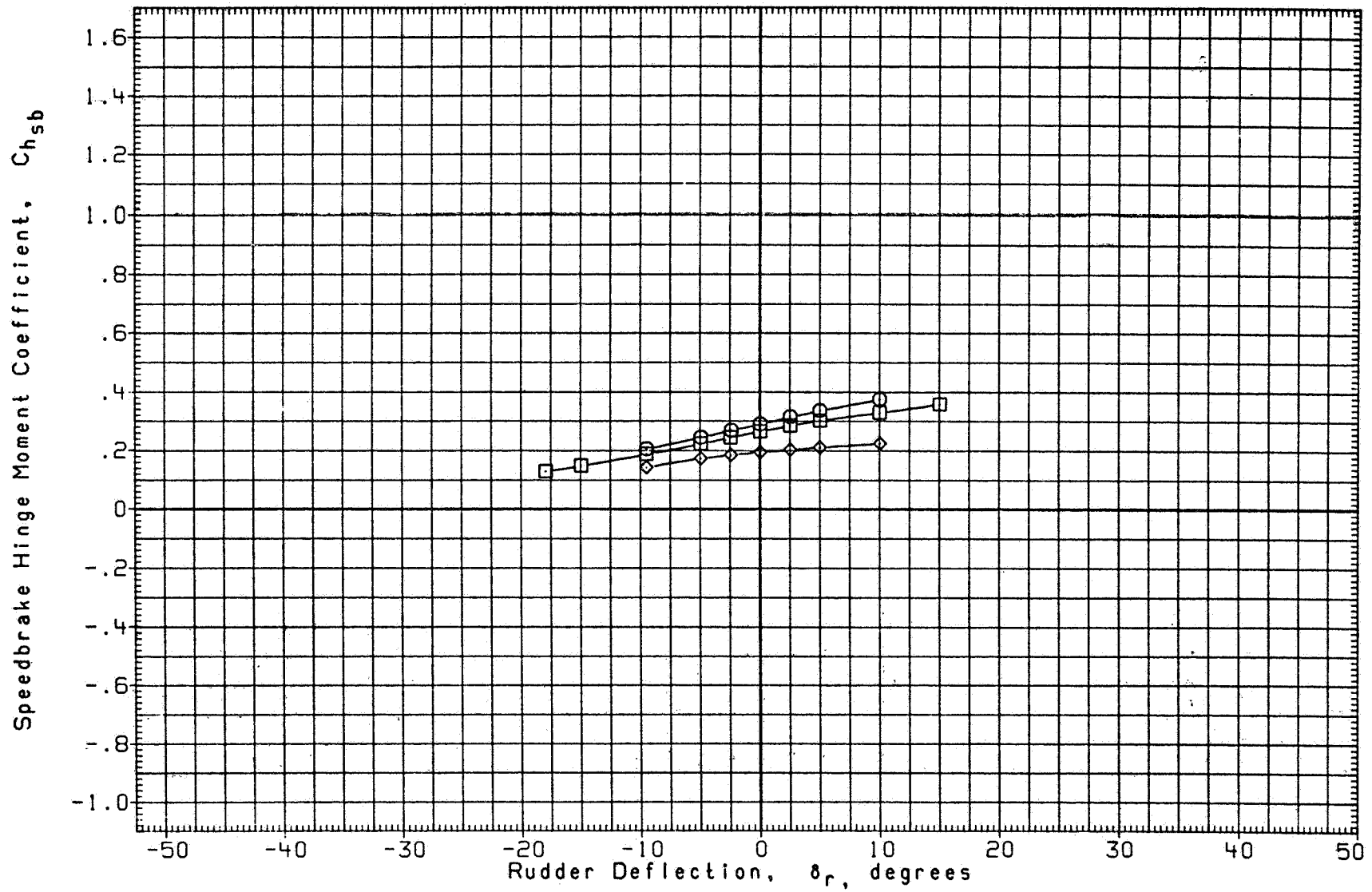


FIG.18 RUDDER EFFECTIVENESS, SPEEDBRAKE=87.2 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
R2H069	○	AMES 118-1-87 OA145C 01	25.000	.000	.000	.000
R2H079	□	AMES 118-1-87 OA145C 01	40.000	.000	.000	.000
R2H048	◇	AMES 118-1-87 OA145C 01	55.000	.000	.000	.000
R2H088	△	AMES 118-1-87 OA145C 01	70.000	.000	.000	.000
R2H099	▽	AMES 118-1-87 OA145C 01	87.200	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	0500	

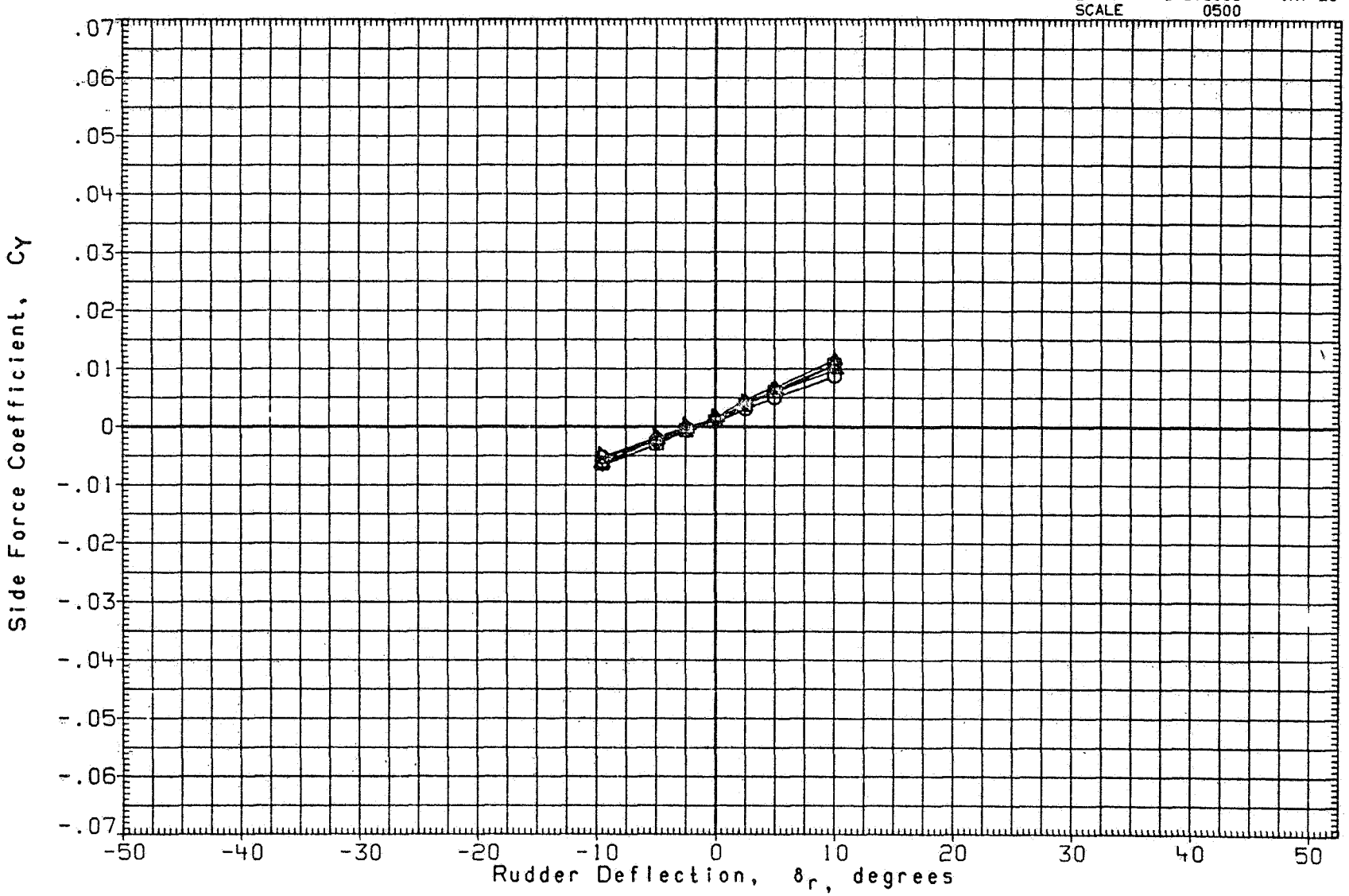


FIG.19 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=10 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
R2H069	○	AMES 118-1-87 0A145C 01	25.000	.000	.000	.000
R2H079	□	AMES 118-1-87 0A145C 01	40.000	.000	.000	.000
R2H048	◇	AMES 118-1-87 0A145C 01	55.000	.000	.000	.000
R2H088	△	AMES 118-1-87 0A145C 01	70.000	.000	.000	.000
R2H099	◁	AMES 118-1-87 0A145C 01	87.200	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

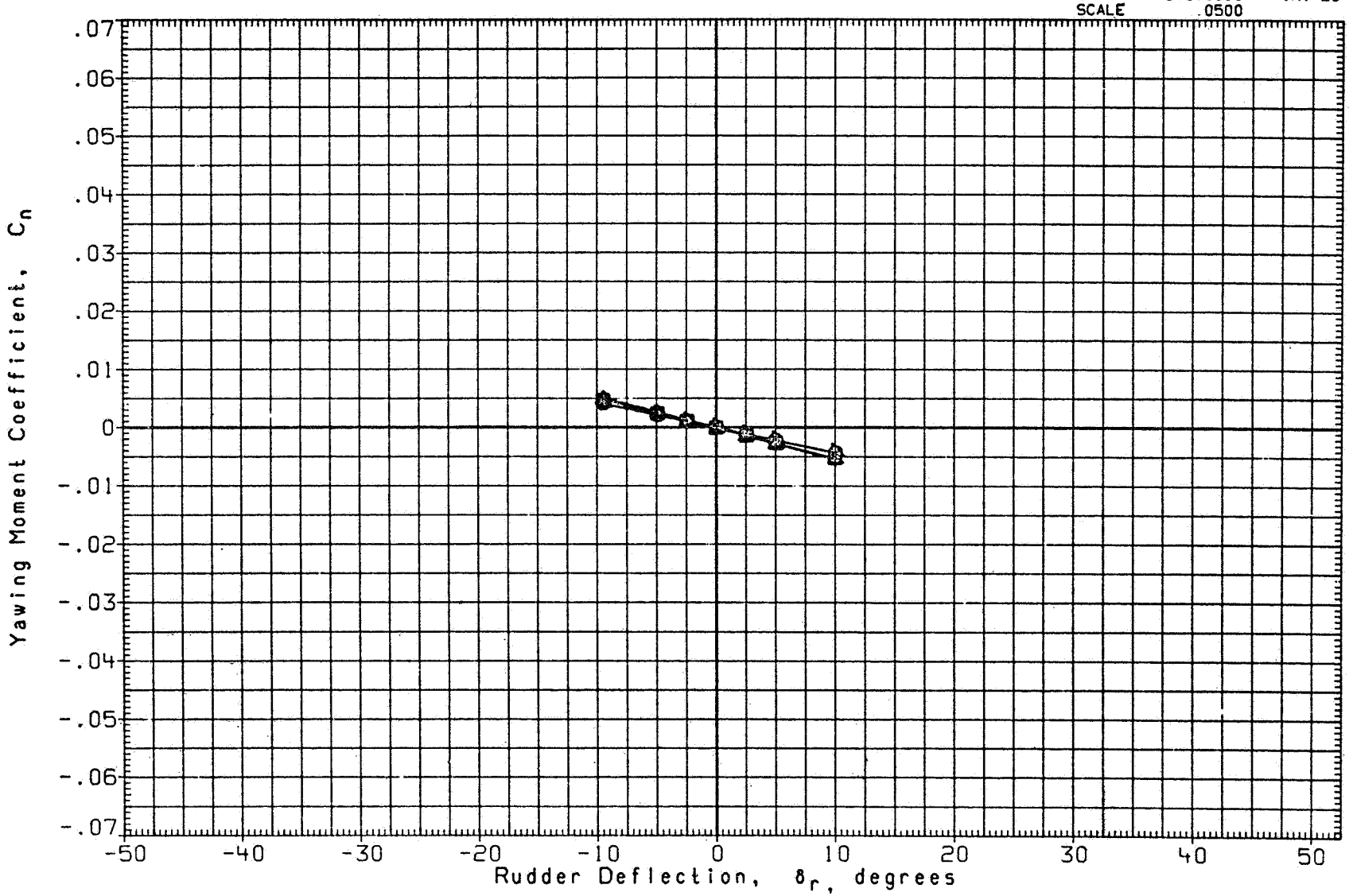


FIG.19 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=10 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
R2H069	○	AMES 118-1-87 0A145C 01	25.000	.000	.000	000
R2H079	□	AMES 118-1-87 0A145C 01	40.000	.000	.000	.000
R2H048	◇	AMES 118-1-87 0A145C 01	55.000	.000	.000	.000
R2H088	△	AMES 118-1-87 0A145C 01	70.000	.000	.000	.000
R2H099	▷	AMES 118-1-87 0A145C 01	87.200	000	.000	000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

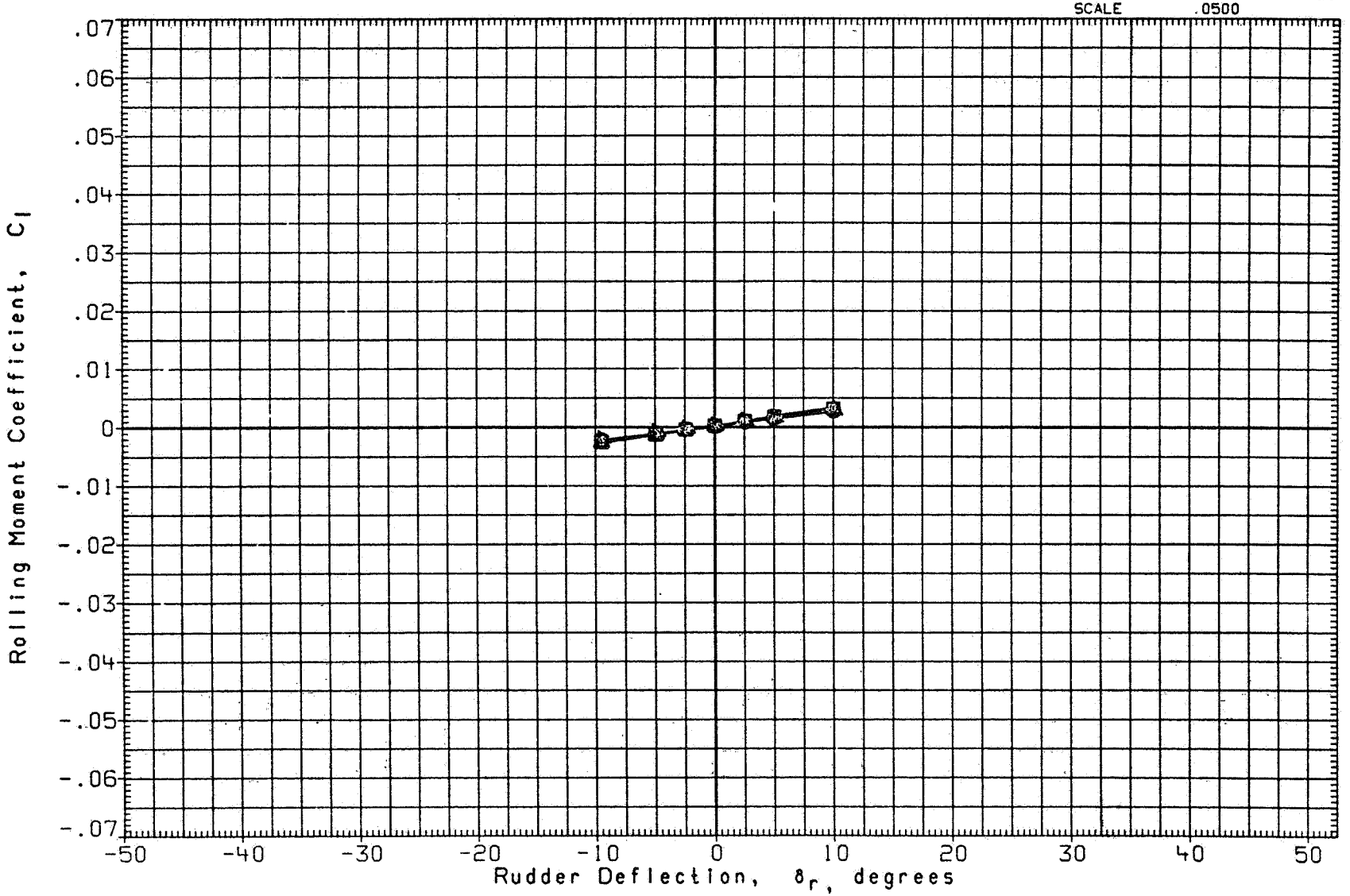


FIG.19 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=10 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
G2H069	○	AMES 118-1-87 0A145C 01	25.000	.000	.000	.000
G2H048	□	AMES 118-1-87 0A145C 01	55.000	.000	.000	.000
G2H099	◇	AMES 118-1-87 0A145C 01	87 200	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

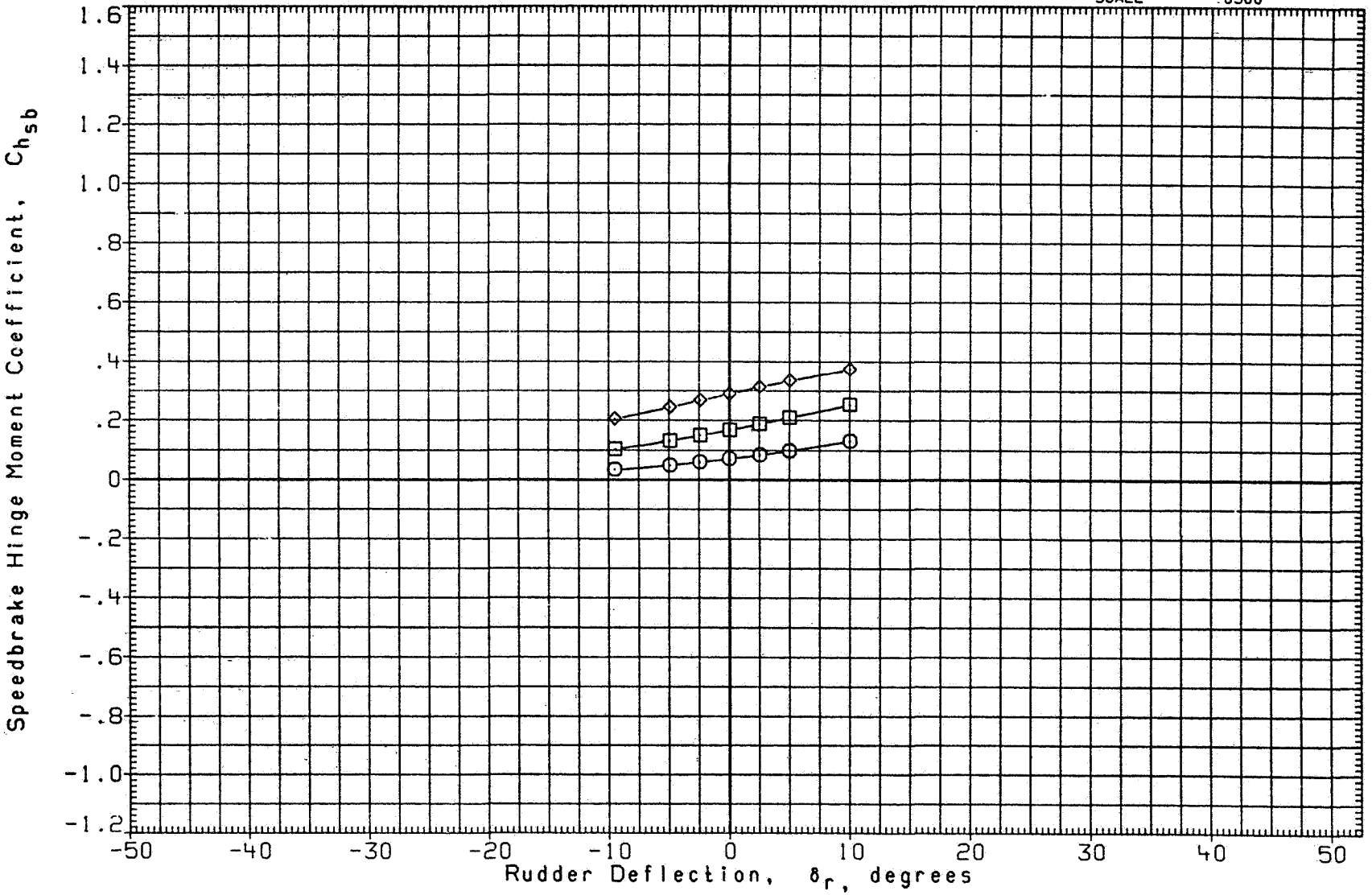


FIG.19 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=10 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
R2H070	○	AMES 118-1-87 0A145C 01	25.000	.000	.000	.000
R2H080	□	AMES 118-1-87 0A145C 01	40.000	000	.000	.000
R2H049	◇	AMES 118-1-87 0A145C 01	55.000	.000	.000	.000
R2H089	△	AMES 118-1-87 0A145C 01	70.000	.000	.000	.000
R2H0A0	▽	AMES 118-1-87 0A145C 01	87.200	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	0500	

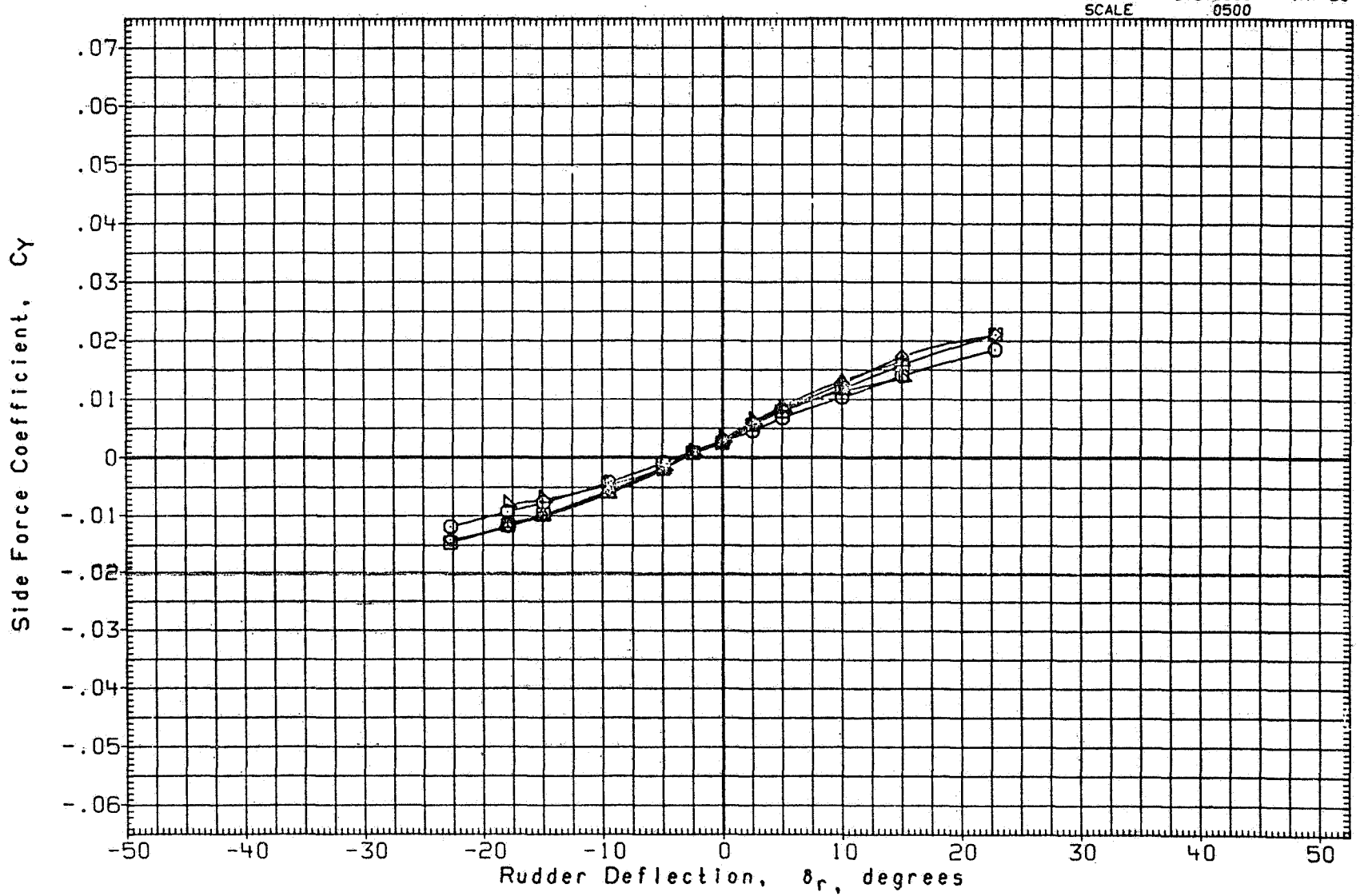


FIG.20 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=15 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
R2H070	○	AMES 118-1-87 OA145C 01	25.000	.000	.000	.000
R2H080	□	AMES 118-1-87 OA145C 01	40.000	.000	.000	.000
R2H049	◇	AMES 118-1-87 OA145C 01	55.000	.000	.000	.000
R2H089	◁	AMES 118-1-87 OA145C 01	70.000	.000	.000	.000
R2H0A0	▽	AMES 118-1-87 OA145C 01	87.200	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

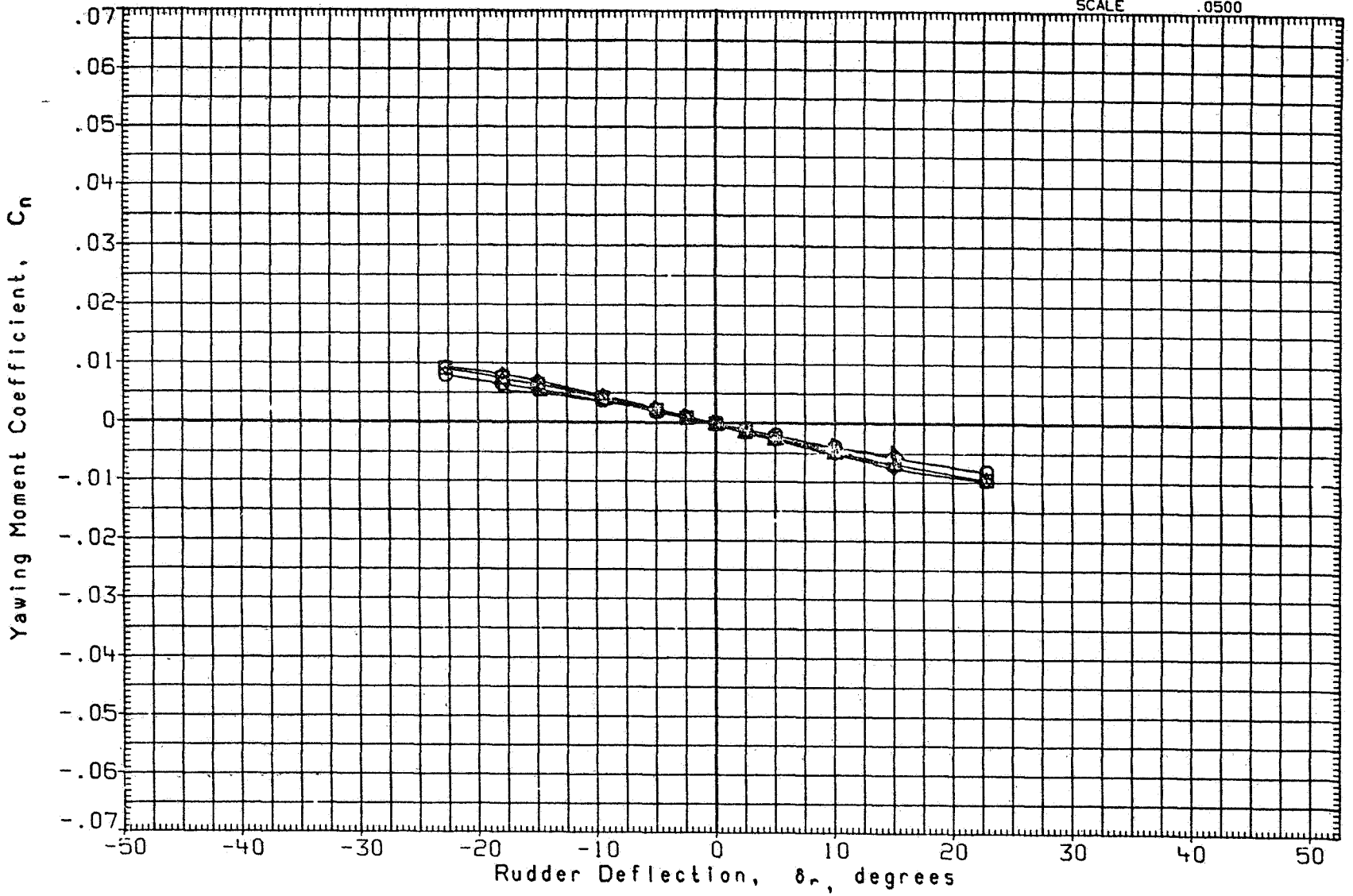


FIG.20 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=15 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
R2H070	○	AMES 118-1-87 0A145C 01	25.000	.000	000	.000
R2H080	□	AMES 118-1-87 0A145C 01	40.000	000	.000	.000
R2H049	◇	AMES 118-1-87 0A145C 01	55.000	.000	.000	.000
R2H089	△	AMES 118-1-87 0A145C 01	70.000	.000	.000	.000
R2H0A0	▽	AMES 118-1-87 0A145C 01	87.200	000	.000	000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

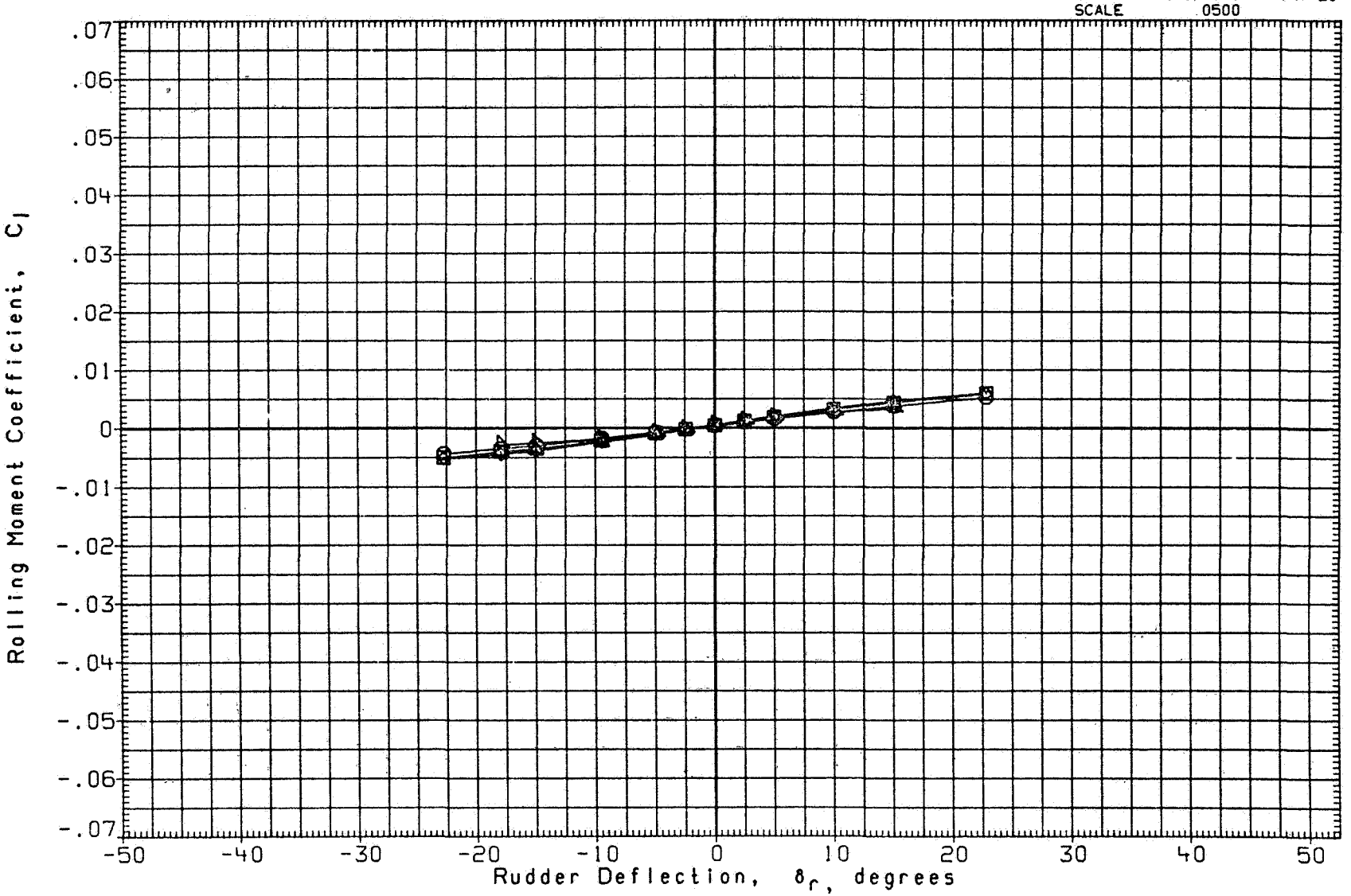


FIG.20 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=15 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
G2H070	○	AMES 118-1-87 OA145C 01	25.000	.000	.000	.000
G2H080	□	AMES 118-1-87 OA145C 01	40.000	.000	.000	.000
G2H049	◇	AMES 118-1-87 OA145C 01	55.000	.000	.000	.000
G2H089	△	AMES 118-1-87 OA145C 01	70.000	.000	.000	.000
G2H0A0	▷	AMES 118-1-87 OA145C 01	87.200	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	0500	

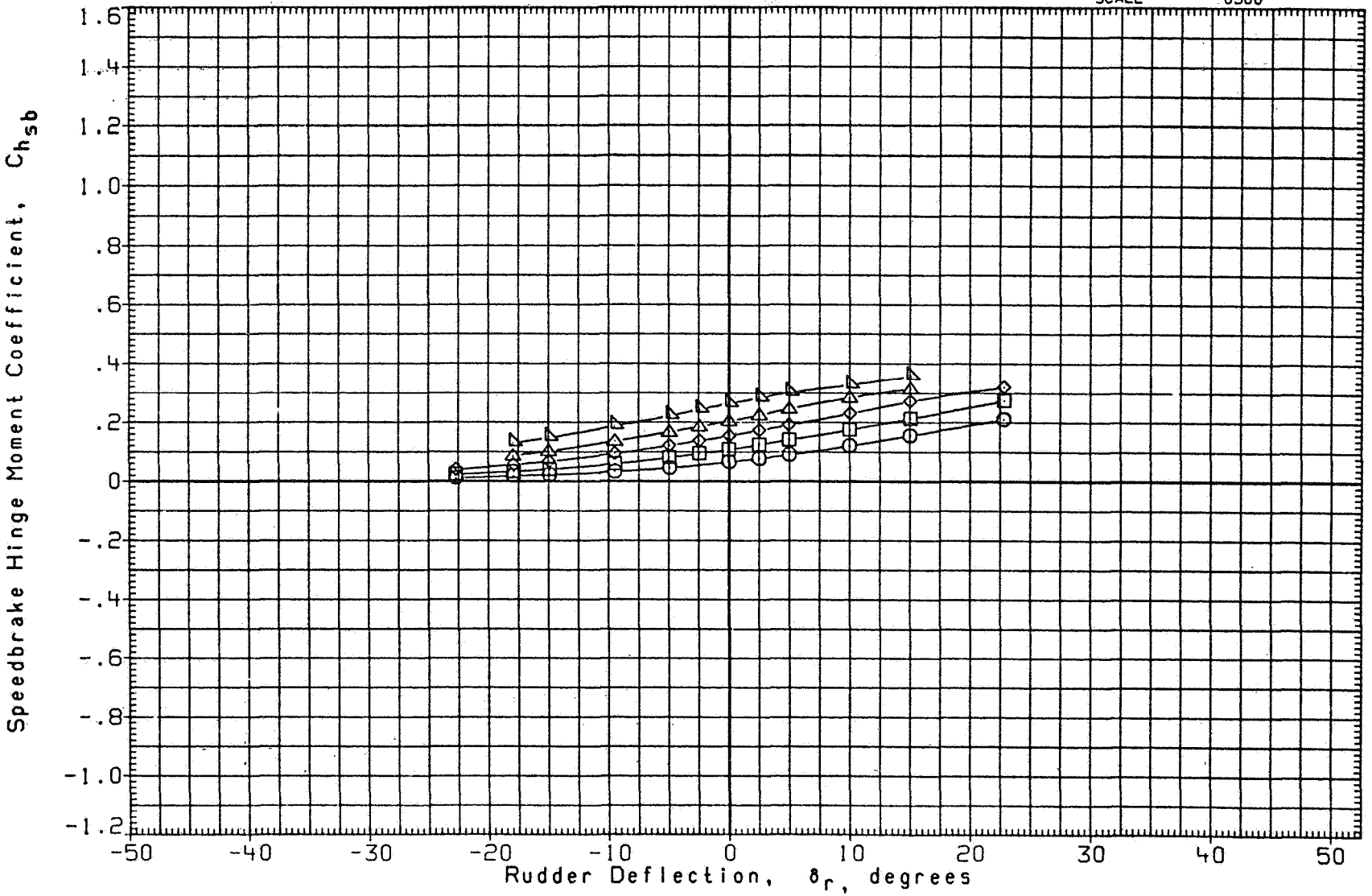


FIG.20 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=15 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
R2H071	○	AMES 118-1-87 OA145C 01	25.000	.000	.000	.000
R2H081	□	AMES 118-1-87 OA145C 01	40.000	.000	.000	.000
R2H050	◇	AMES 118-1-87 OA145C 01	55.000	.000	.000	.000
R2H090	△	AMES 118-1-87 OA145C 01	70.000	.000	.000	.000
R2H0A1	▷	AMES 118-1-87 OA145C 01	87.200	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

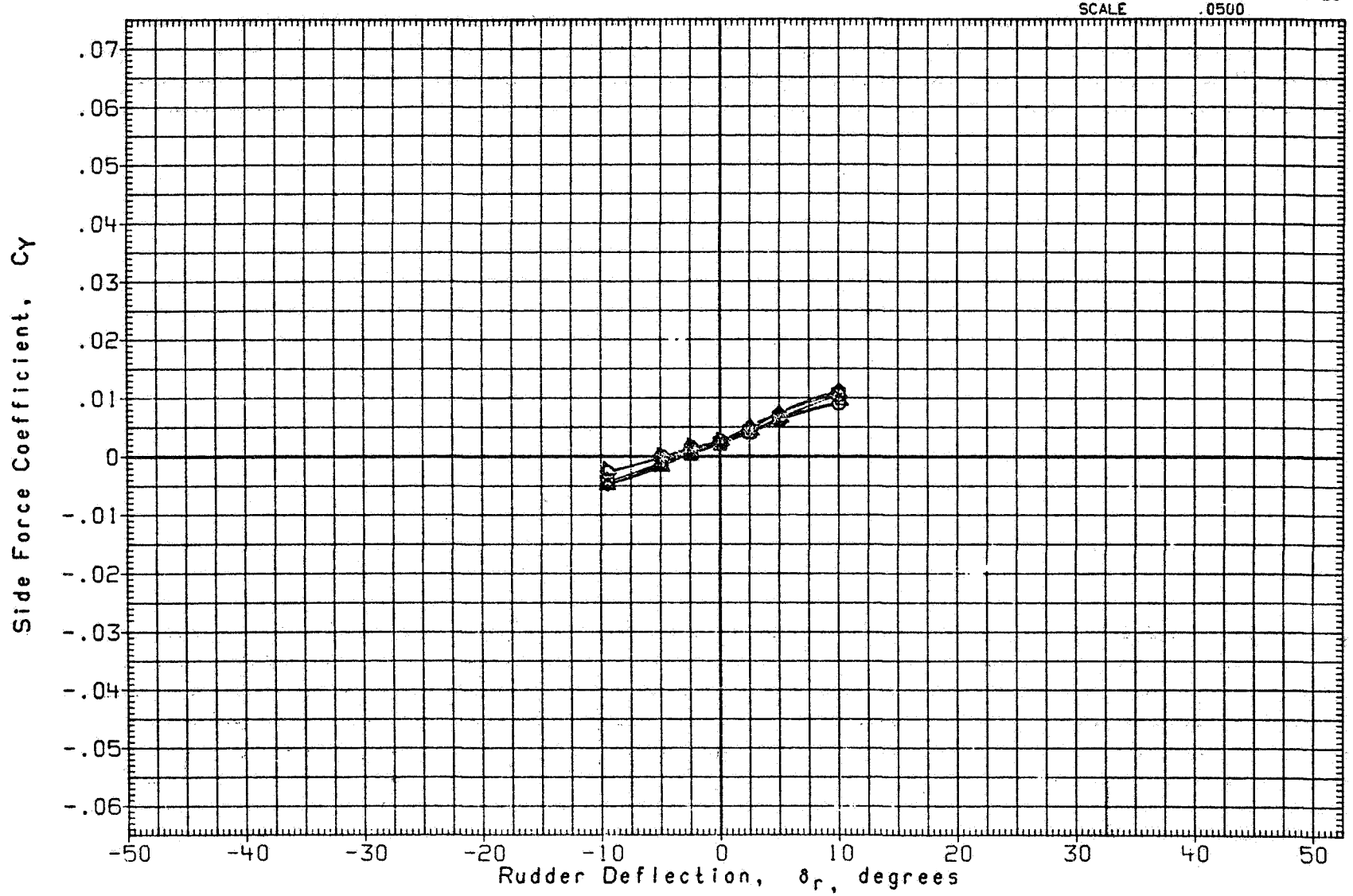


FIG.21 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=20 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
R2H071	○	AMES 118-1-87 0A145C 01	25.000	.000	.000	.000
R2H081	□	AMES 118-1-87 0A145C 01	40.000	.000	.000	.000
R2H050	◇	AMES 118-1-87 0A145C 01	55.000	.000	.000	.000
R2H090	△	AMES 118-1-87 0A145C 01	70.000	.000	.000	.000
R2H0A1	◁	AMES 118-1-87 0A145C 01	87.200	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

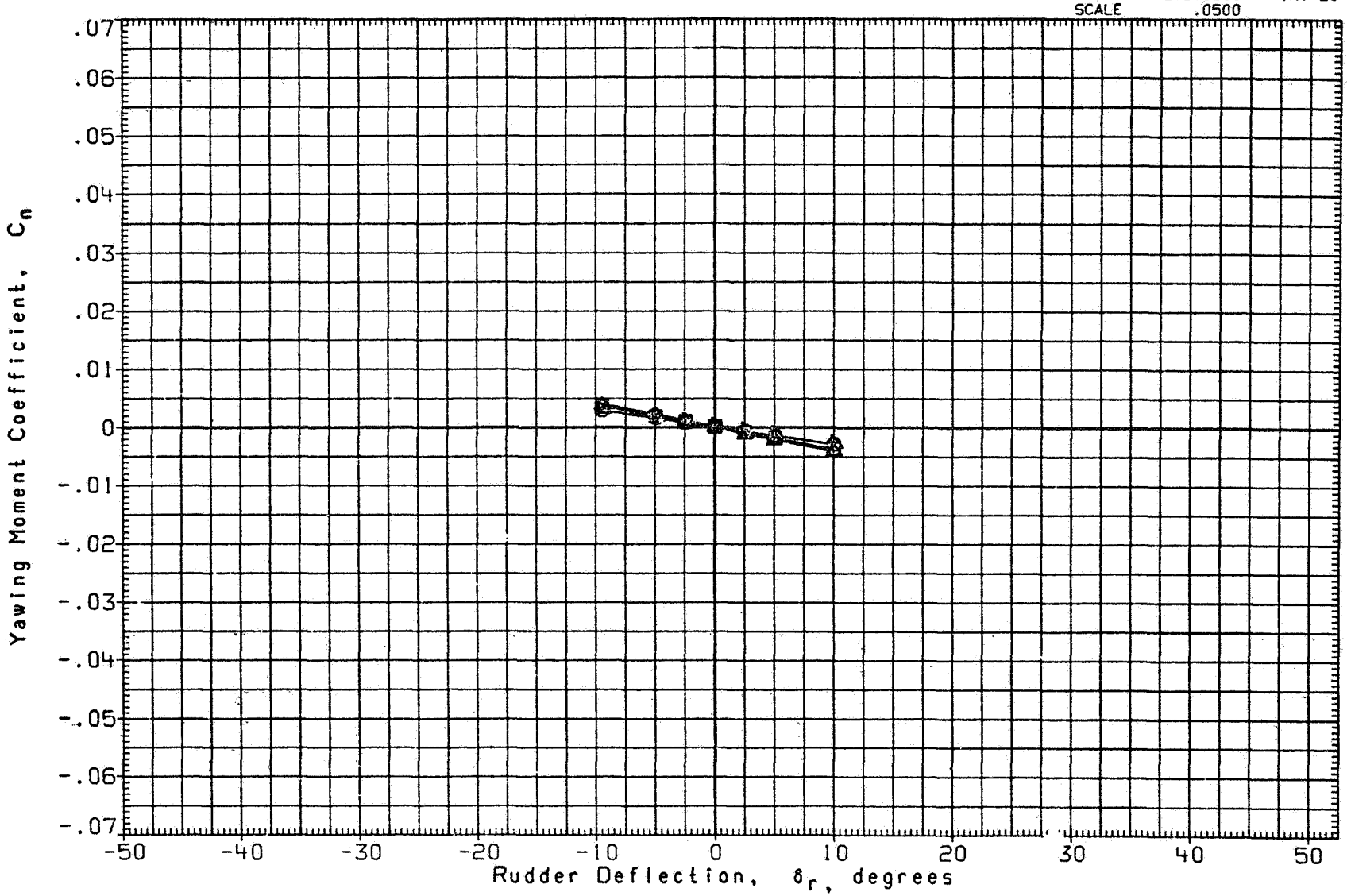


FIG.21 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=20 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
R2H071	○	AMES 118-1-87 OA145C 01	25.000	.000	.000	.000
R2H081	□	AMES 118-1-87 OA145C 01	40.000	.000	.000	.000
R2H050	◇	AMES 118-1-87 OA145C 01	55.000	.000	.000	.000
R2H090	△	AMES 118-1-87 OA145C 01	70.000	.000	.000	.000
R2H0A1	▽	AMES 118-1-87 OA145C 01	87.200	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

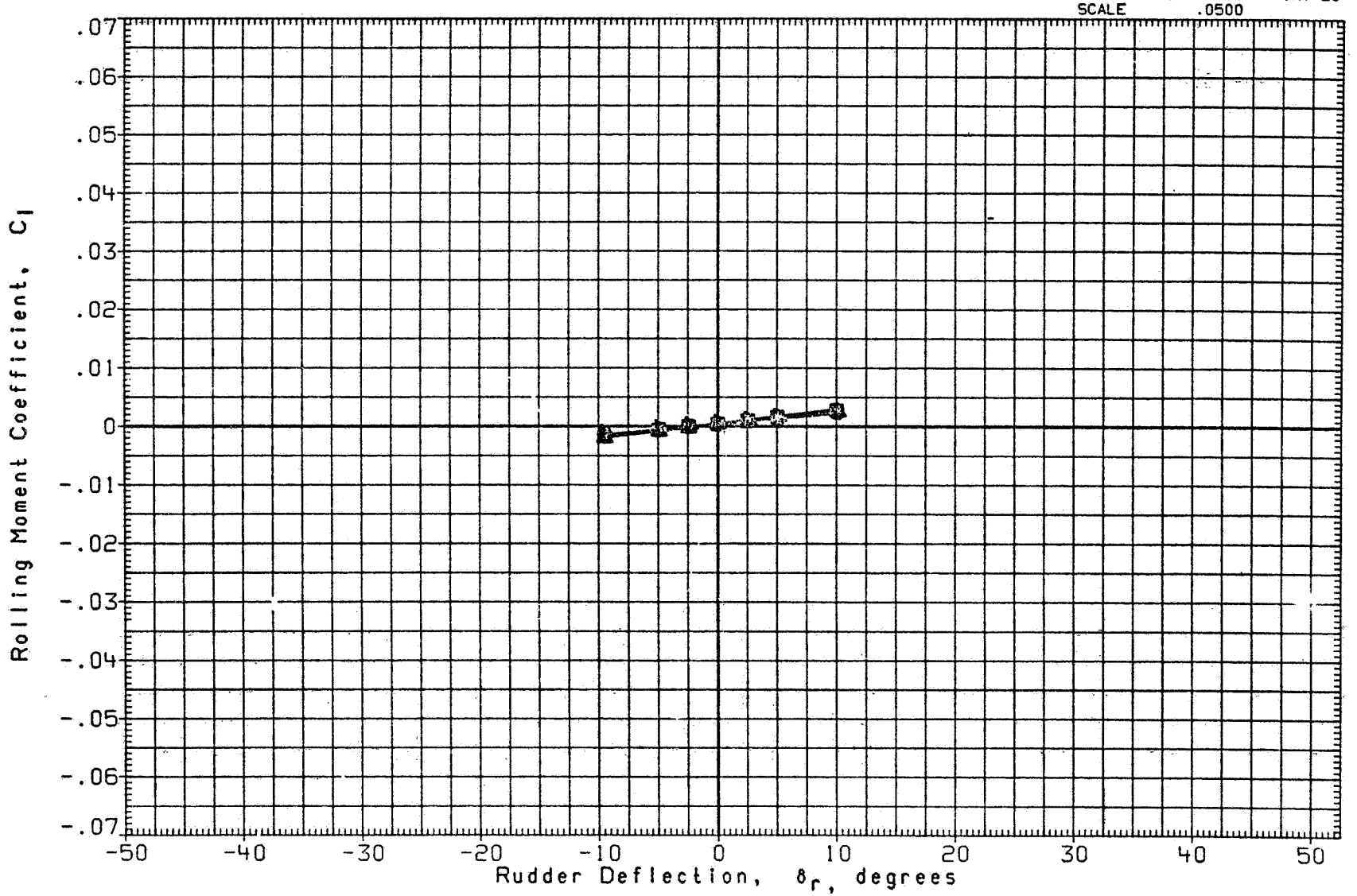


FIG.21 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=20 DEG, BETA=0 DEG

MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	SPDBRK	ELEVON	AILRON	BDFLAP
G2H071	○	AMES 118-1-87 0A145C 01	25.000	000	.000	.000
G2H050	□	AMES 118-1-87 0A145C 01	55.000	.000	.000	.000
G2H0A1	◇	AMES 118-1-87 0A145C 01	87.200	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

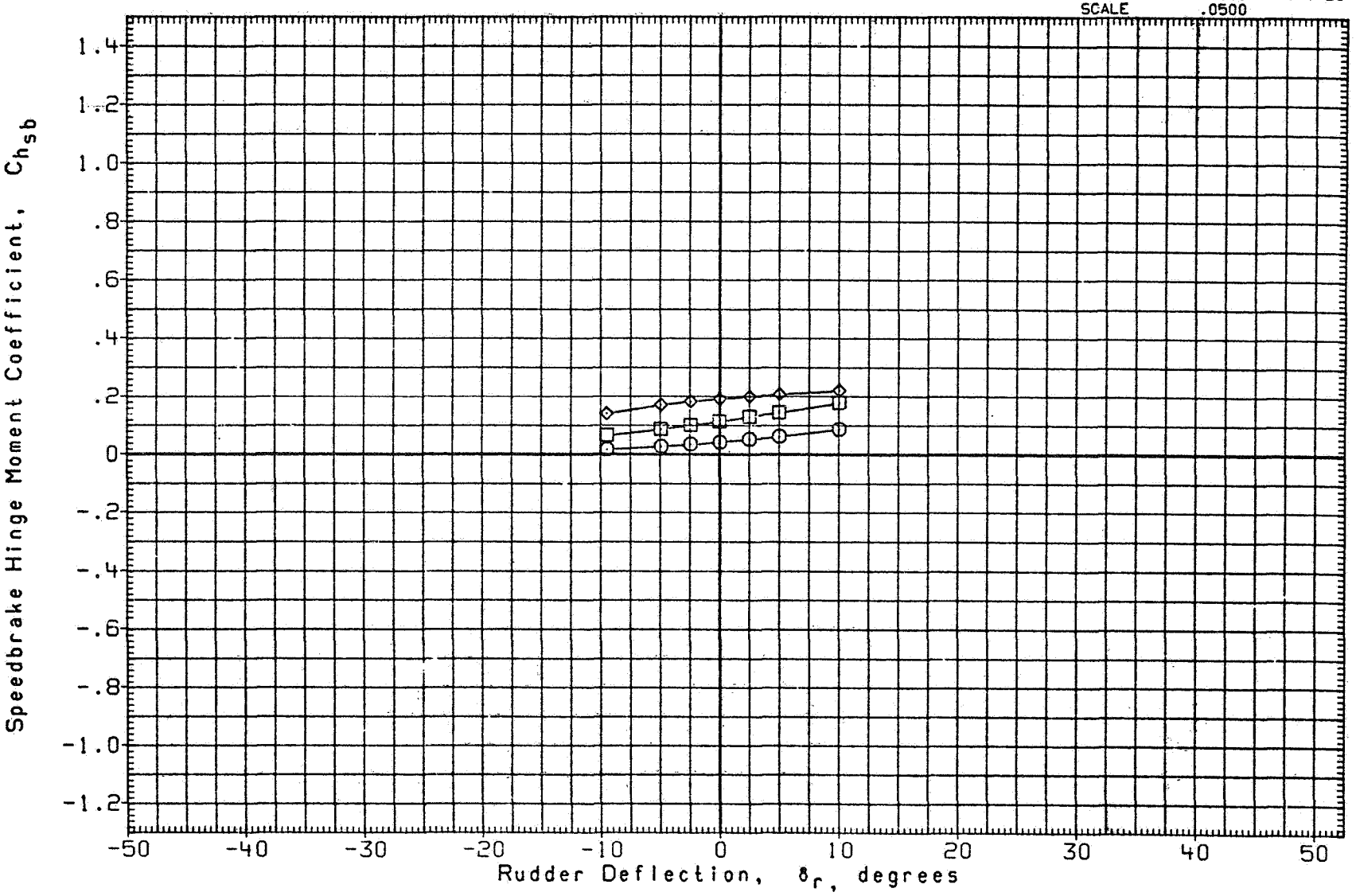


FIG.21 RUDDER EFFECTIVENESS, VARIOUS SPDBRK SETTINGS, ALPHA=20 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-OB	SPDBRK	BDFLAP	ALPHA
R2H0C0	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H088	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H089	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

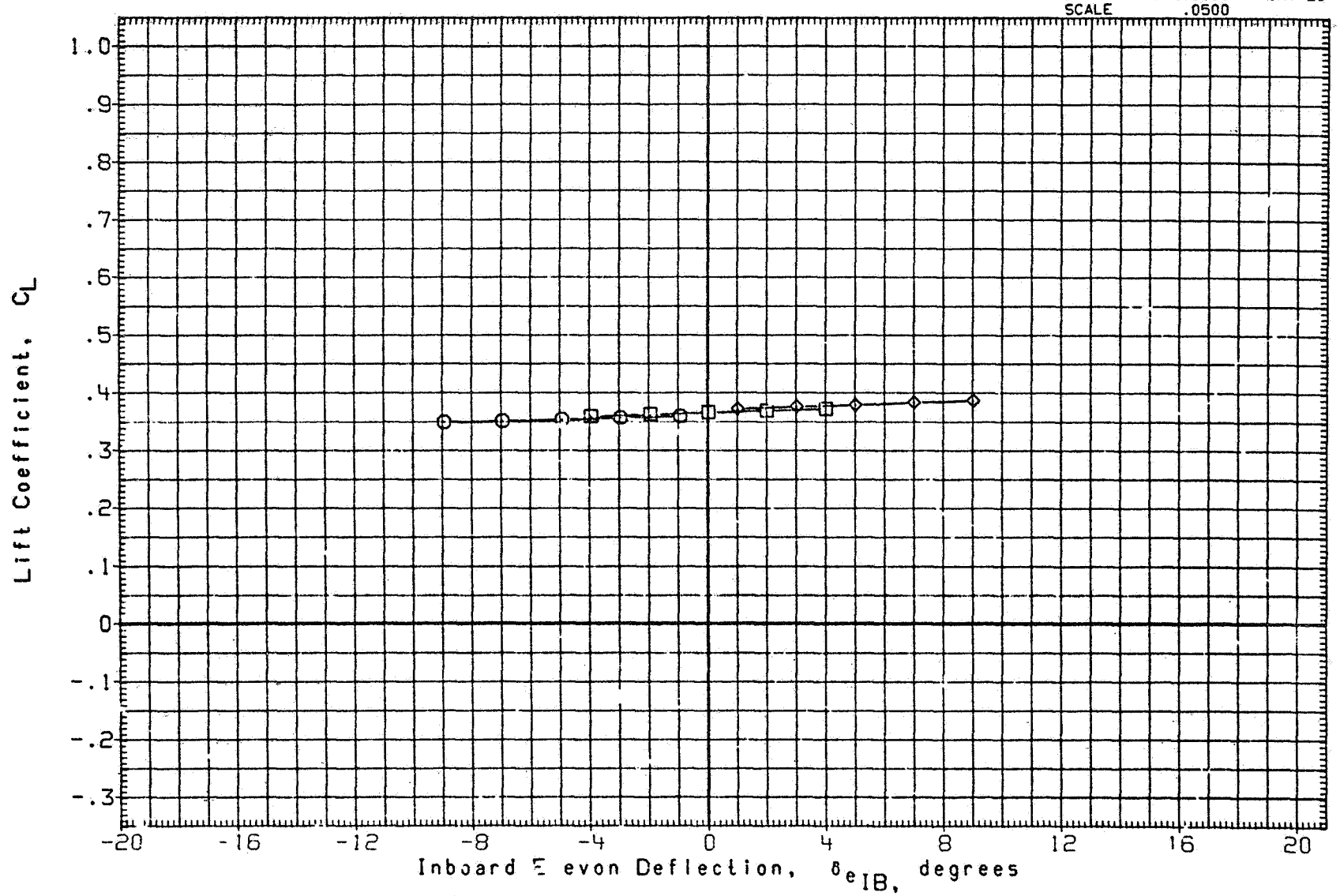


FIG.22 INB D/OUTB'D ELEV EFFECTS: INB'D MOVE, OUTB'D FIX, ALPHA=15, BETA=0, AILRON=0

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-OB	SPDBRK	BDFLAP	ALPHA
R2H0C0	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0B8	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0B9	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

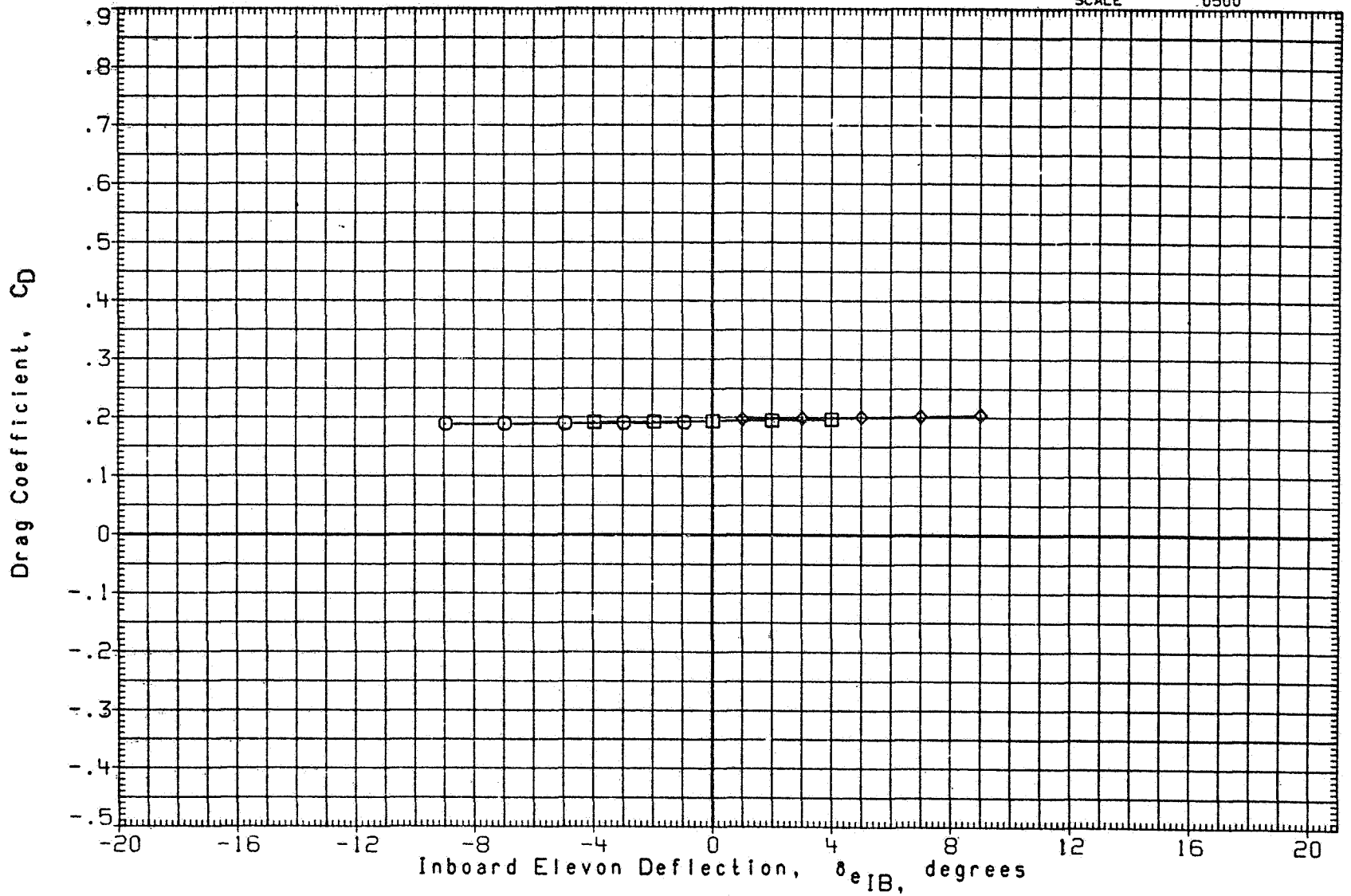


FIG.22 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE, OUTB'D FIX, ALPHA=15, BETA=0, AILRON=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-OB	SPDBRK	BDFLAP	ALPHA
R2H0C0	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0B8	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0B9	◇	AMES 118-1-87 0A145C 01	5.000	55.000	000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

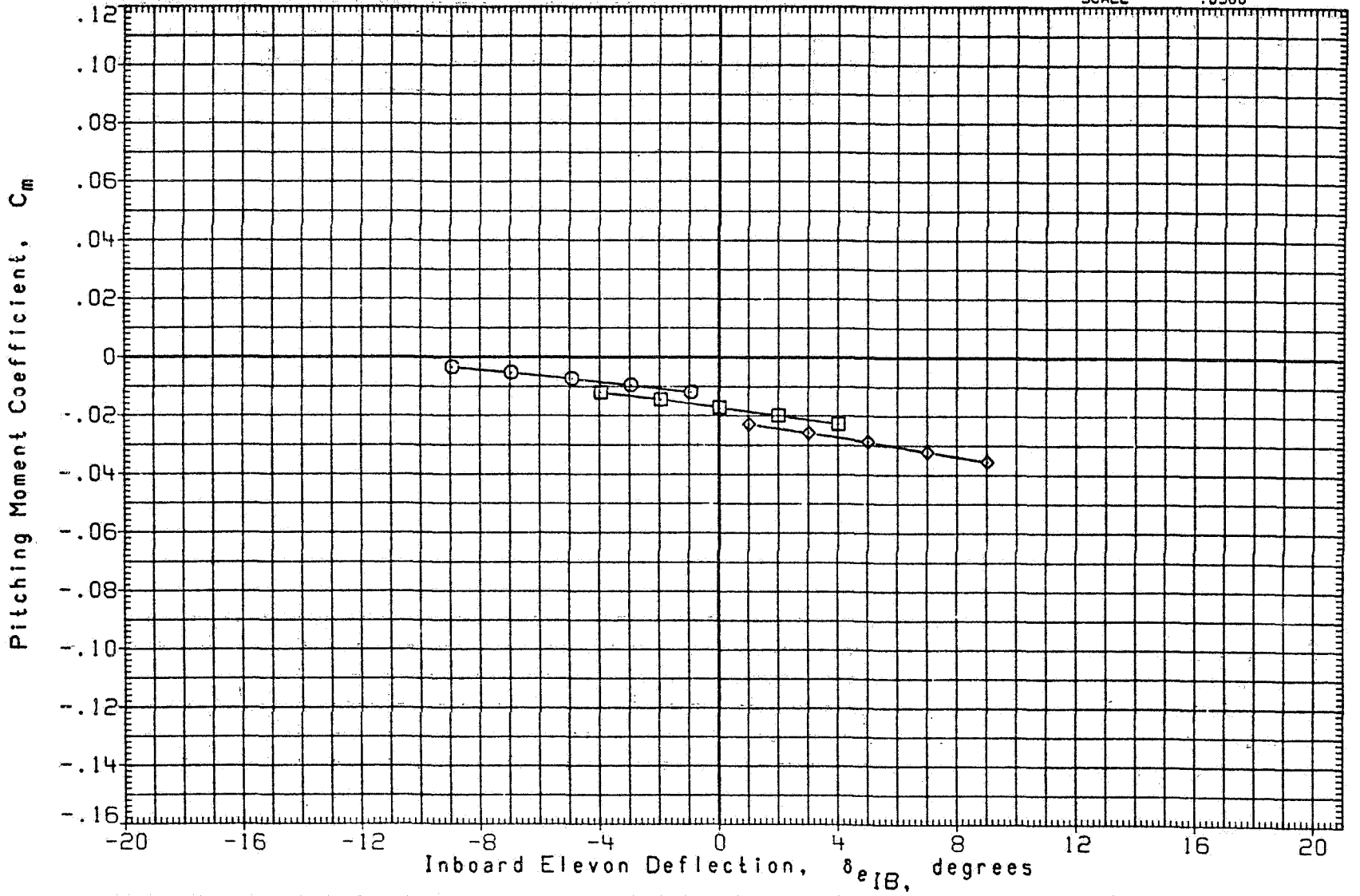


FIG.22 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE, OUTB'D FIX, ALPHA=15, BETA=0, AILRON=0

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-OB	SPOBRK	BDFLAP	ALPHA
G2H0C0	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
G2H0B8	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
G2H0B9	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

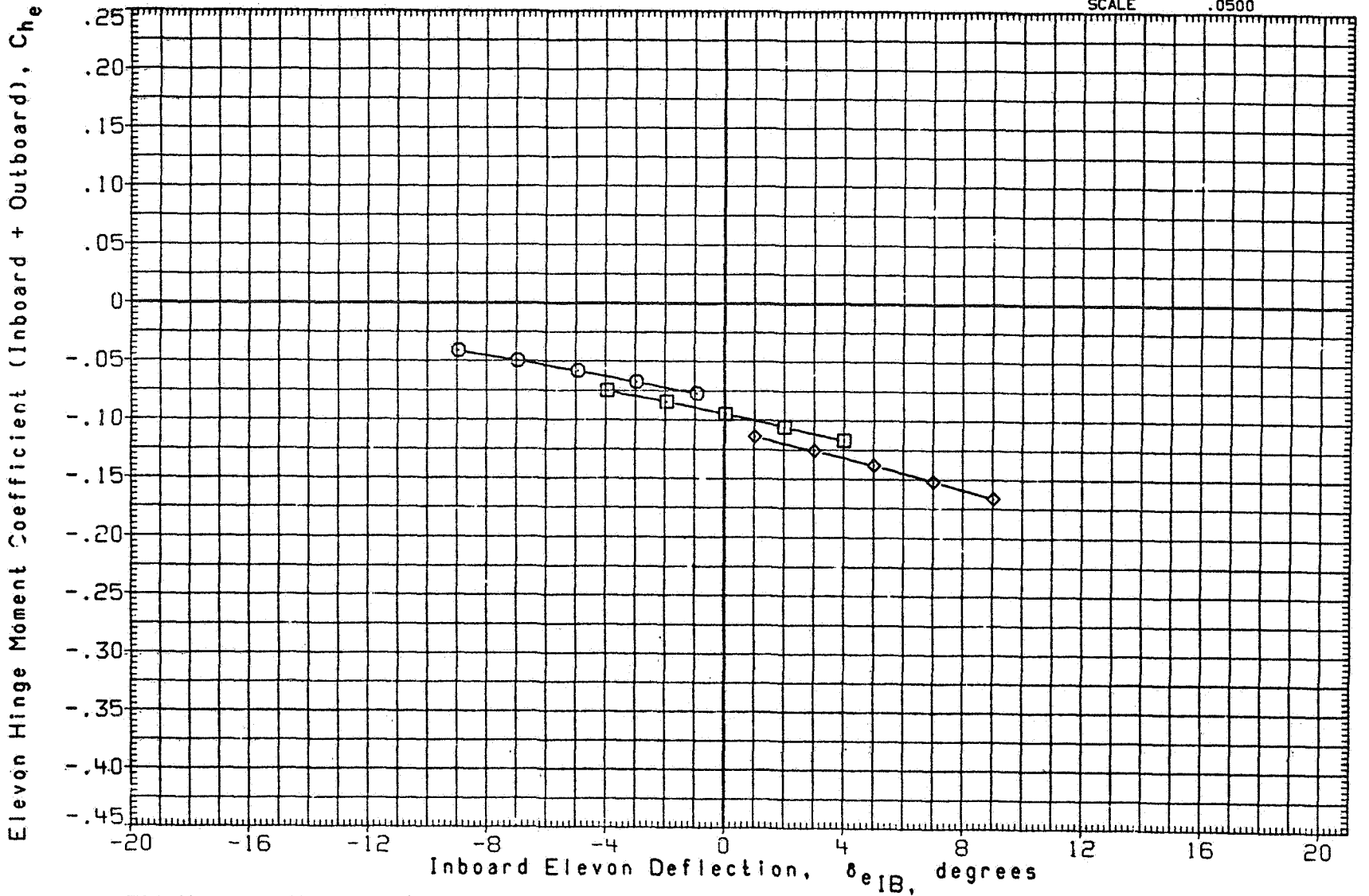


FIG.22 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE, OUTB'D FIX, ALPHA=15, BETA=0, AILRON=0

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-OB	SPDBRK	BDFLAP	ALPHA
G2H0C0	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
G2H0B8	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
G2H0B9	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

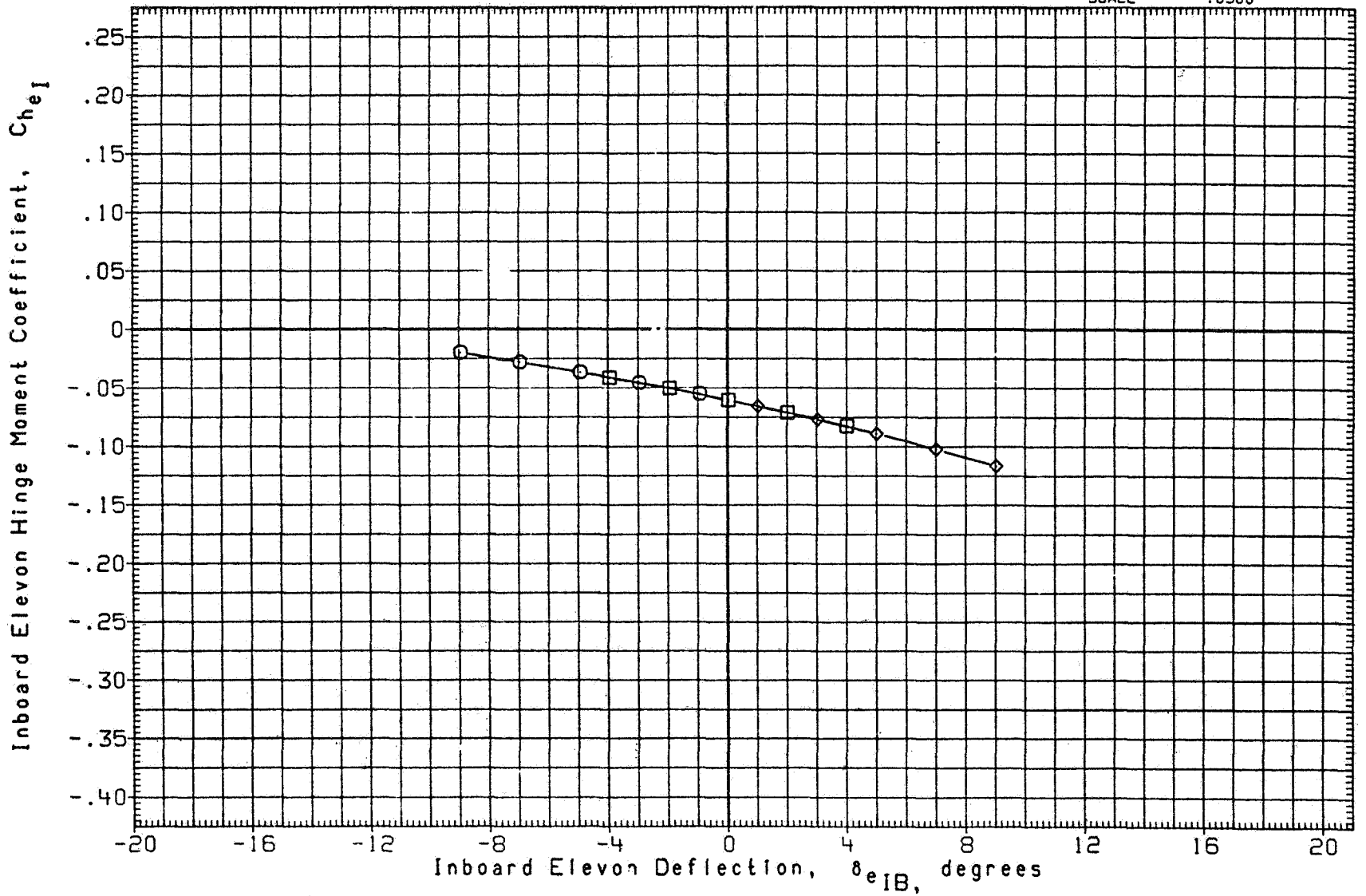


FIG.22 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE, OUTB'D FIX, ALPHA=15, BETA=0, AILRON=0

'A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-OB	SPOBRK	BOFLAP	ALPHA
G2H0C0	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
G2H0B8	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
G2H0B9	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

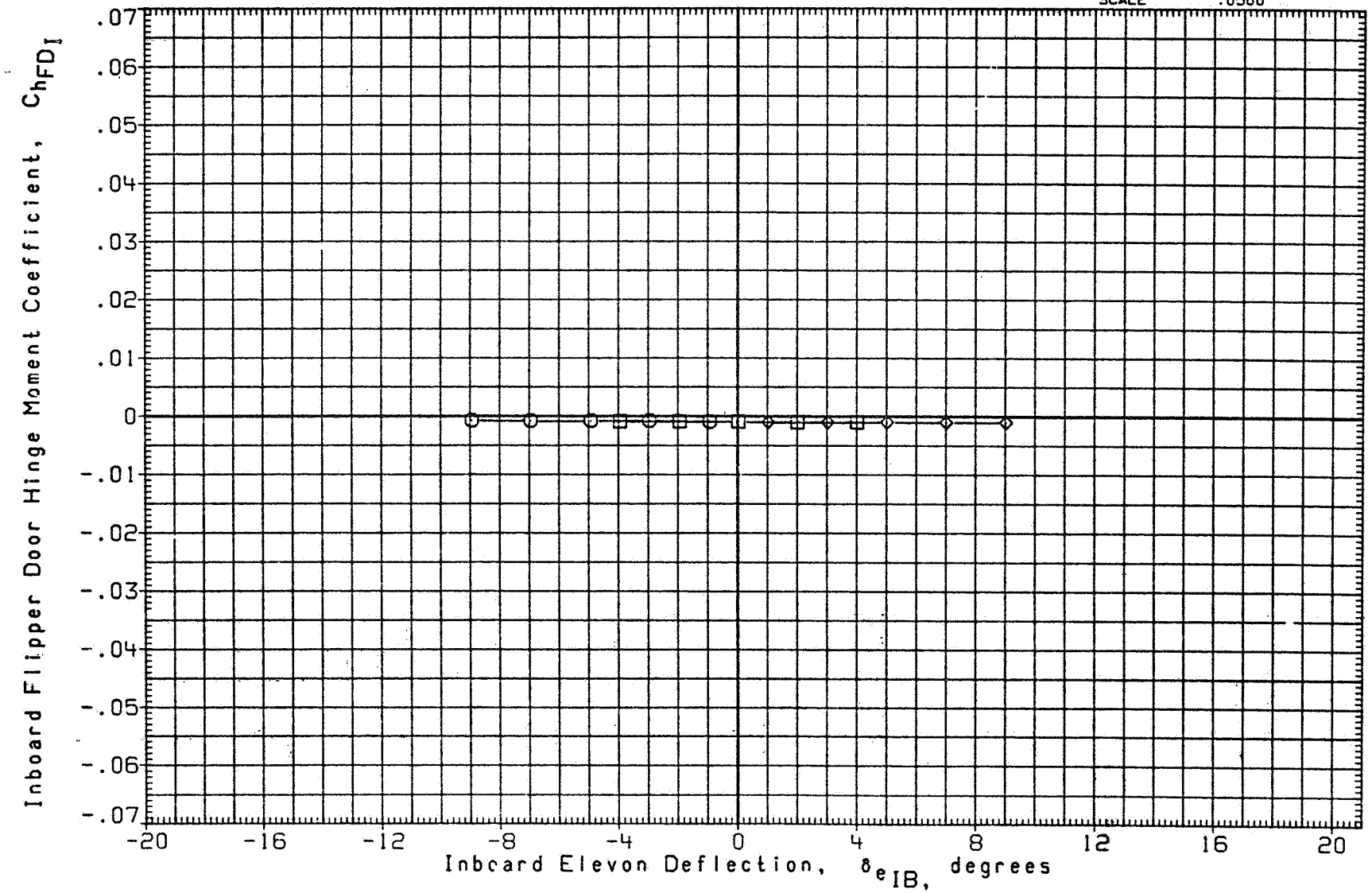


FIG.22 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE, OUTB'D FIX, ALPHA=15, BETA=0, AILRON=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-IB	SPDBRK	BDFLAP	ALPHA
R2H0C3	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C1	□	AMES 118-1-87 0A145C 01	000	55.000	000	15.000
R2H0C2	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

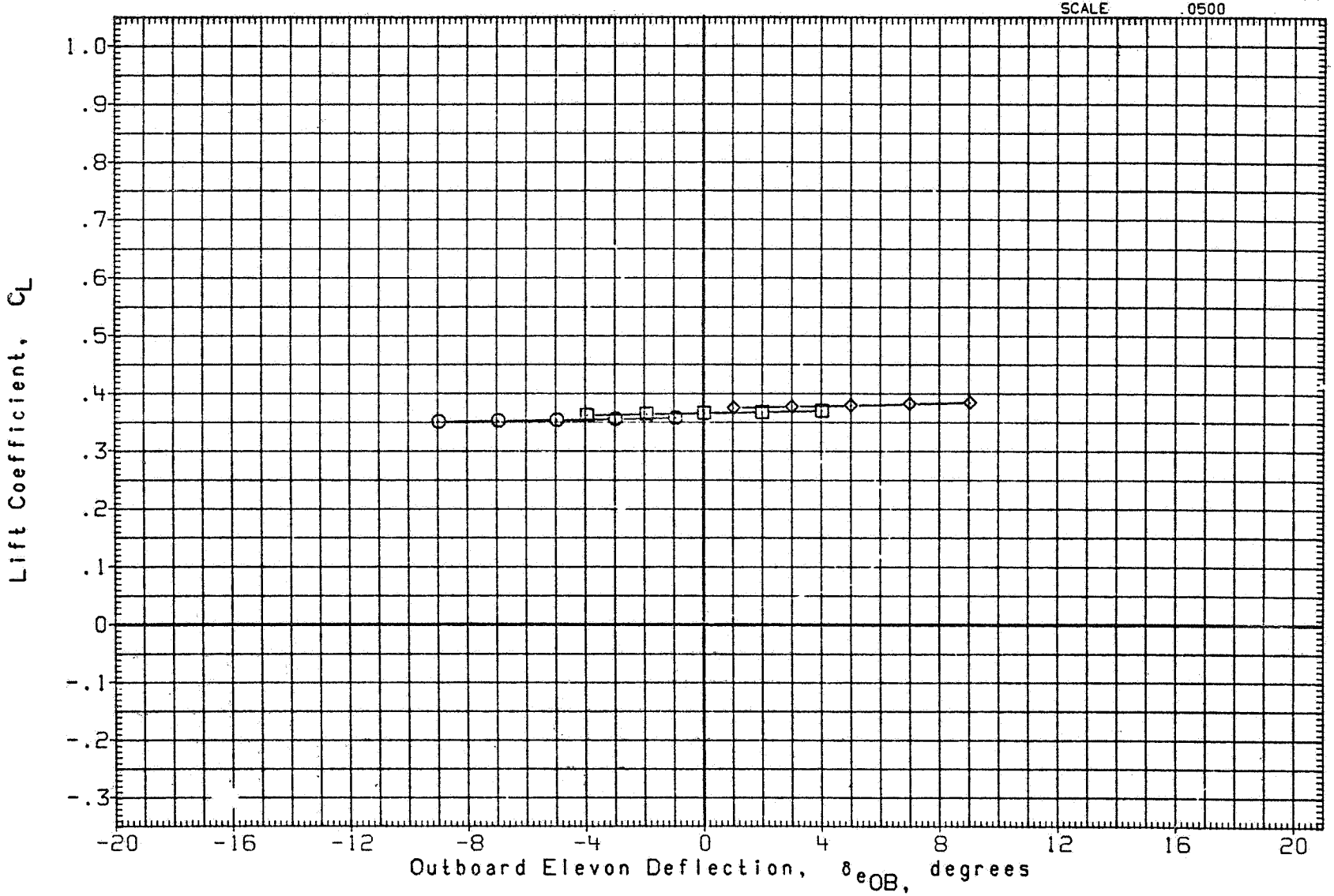


FIG.23 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE,INB'D FIX,ALPHA=15,BETA=0,AILRON=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-IB	SPDBRK	BDFLAP	ALPHA
R2H0C3	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C1	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C2	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

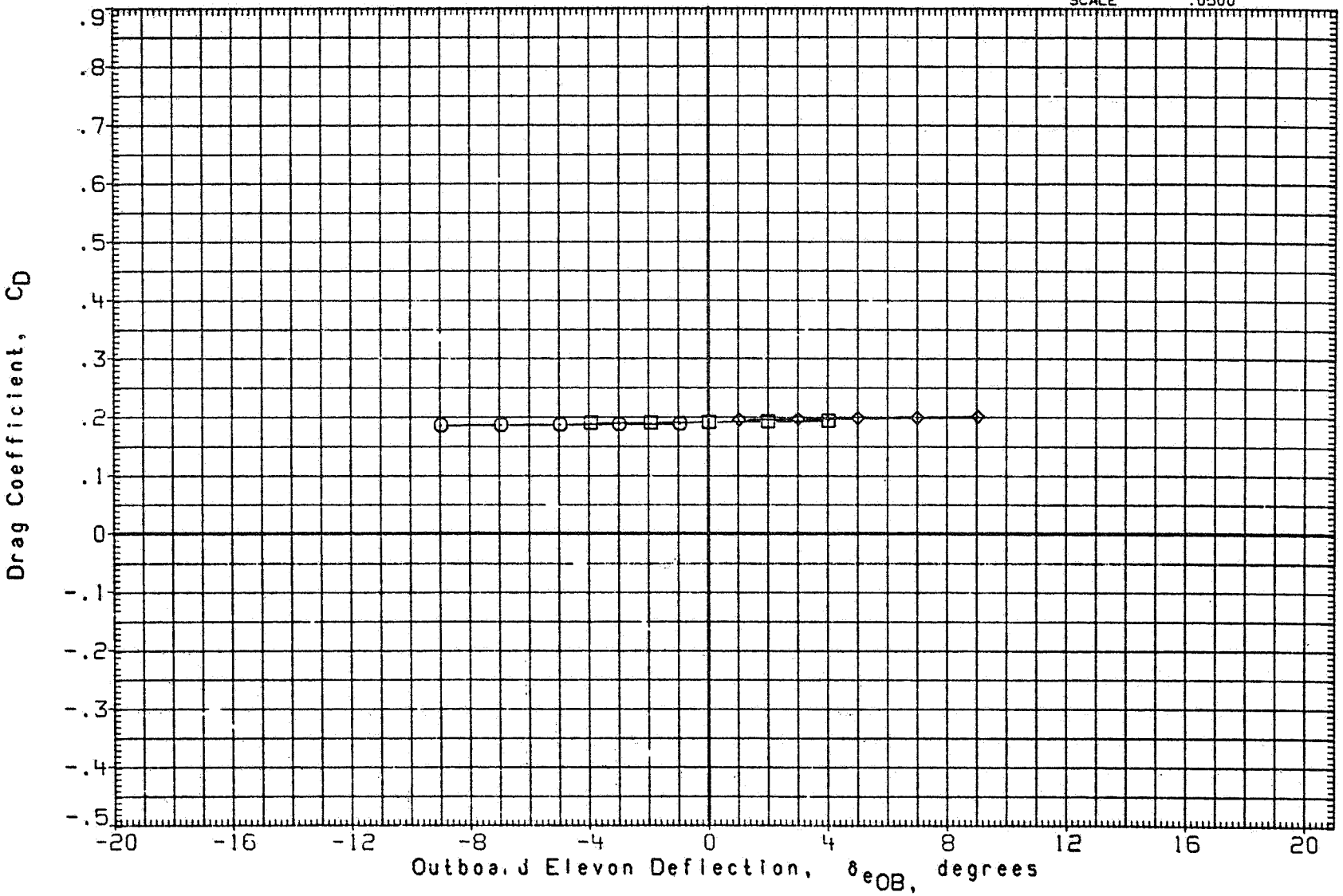


FIG.23 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE,INB'D FIX,ALPHA=15,BETA=0,AILRON=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-IB	SPDBRK	BDFLAP	ALPHA
R2H0C3	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C1	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C2	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

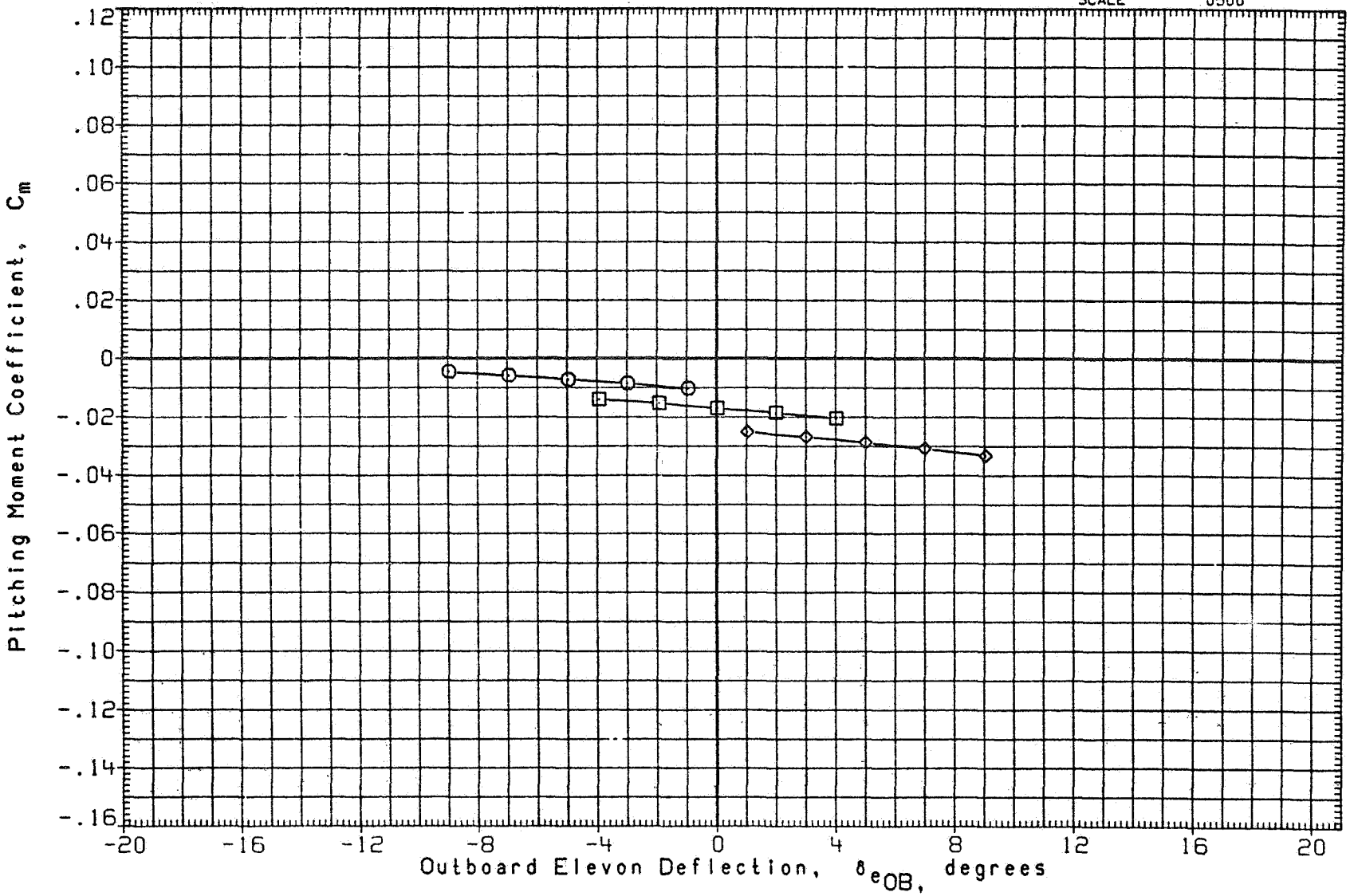


FIG.23 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE,INB'D FIX,ALPHA=15,BETA=0,AILRON=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-IB	SPDBRK	BDFLAP	ALPHA
G2H0C3	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
G2H0C1	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
G2H0C2	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690 0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375 0000	IN. ZO
SCALE	.0500	

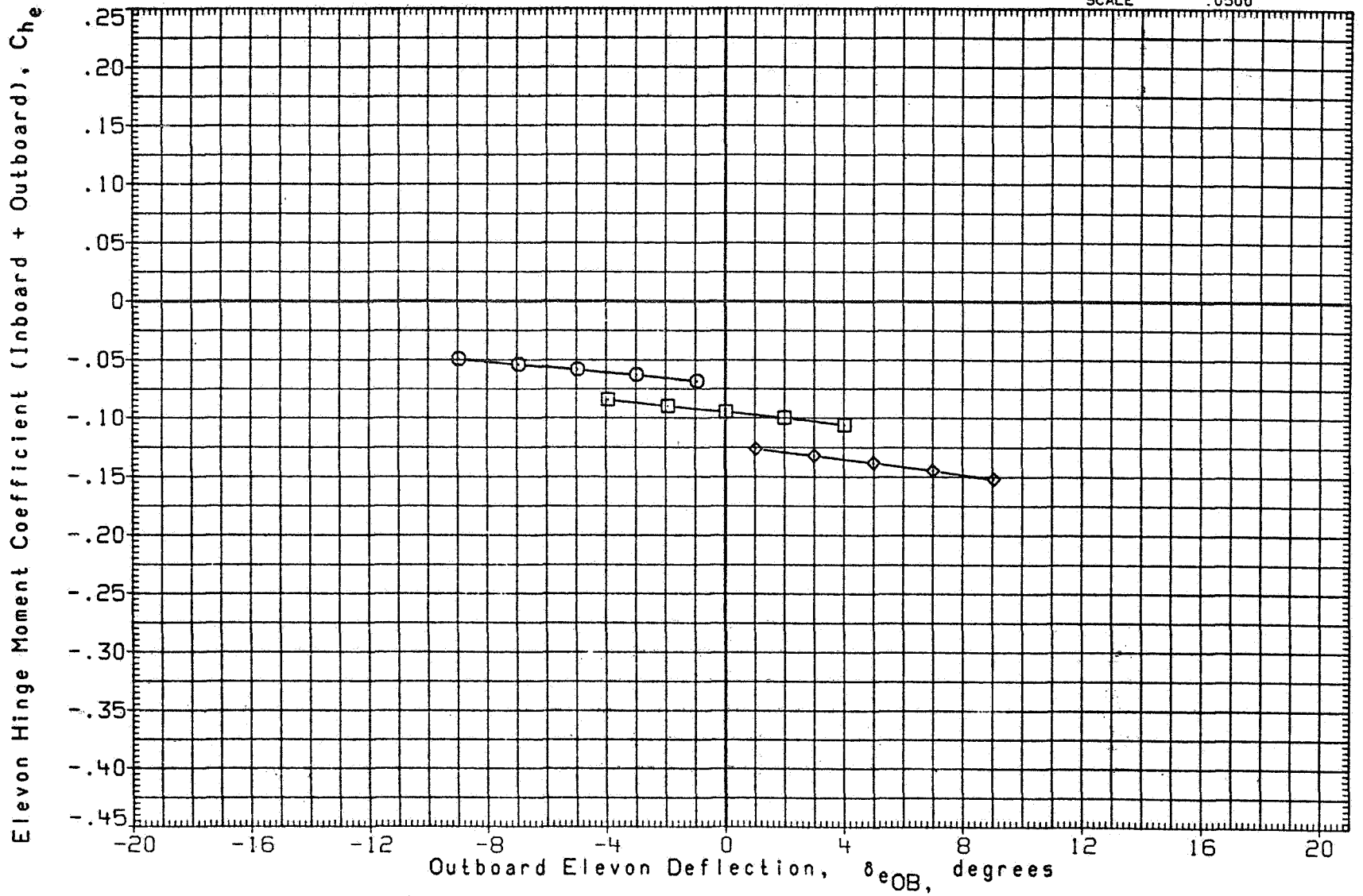


FIG.23 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE,INB'D FIX,ALPHA=15,BETA=0,AILRON=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-IB	SPDBRK	BDFLAP	ALPHA
G2H0C3	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
G2H0C1	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
G2H0C2	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	0500	

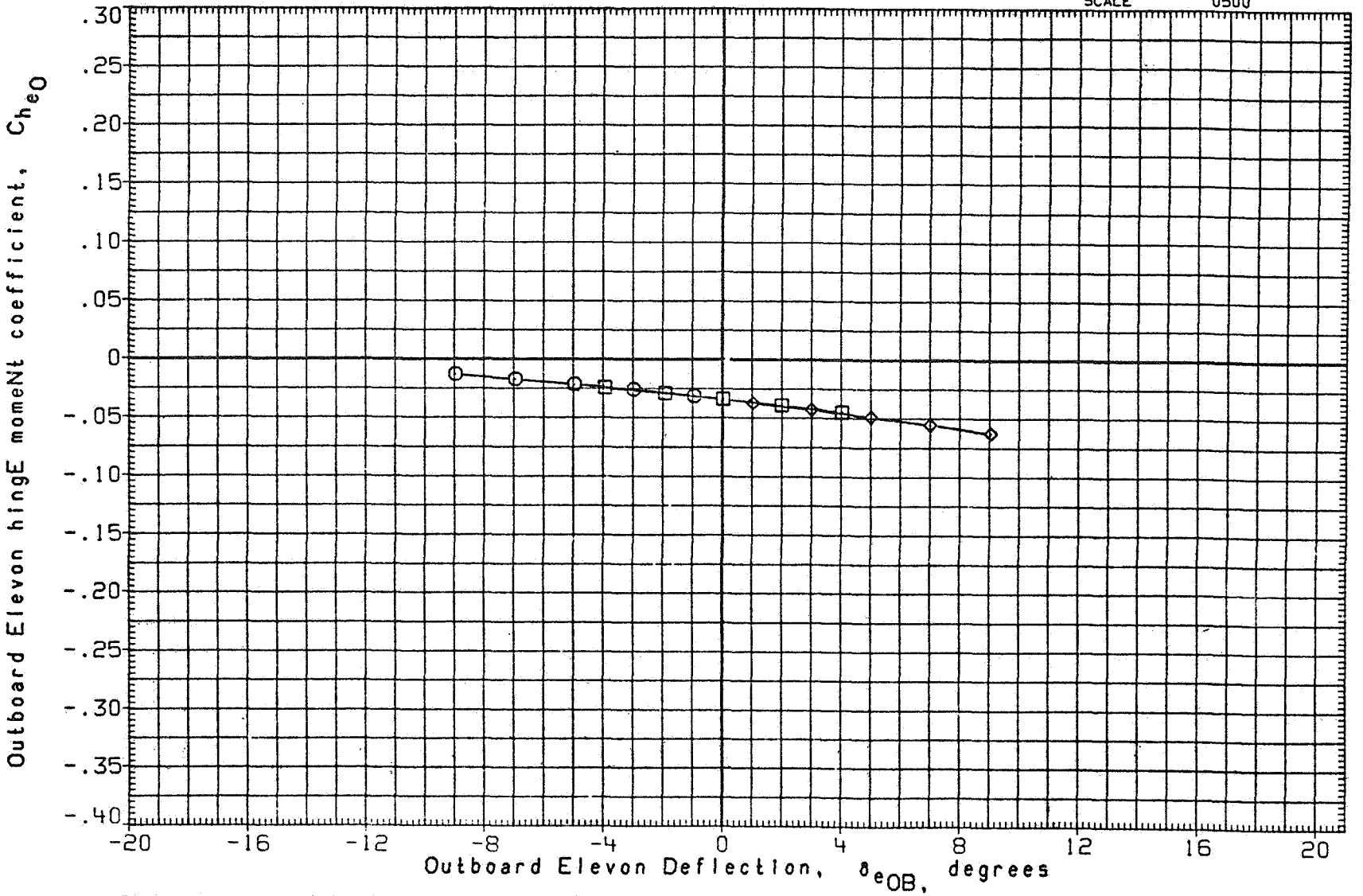


FIG.23 !NB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE,INB'D FIX,ALPHA=15,BETA=0,AILRON=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELV-IB	SPDBRK	BDFLAP	ALPHA
G2H0C3	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
G2H0C1	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
G2H0C2	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

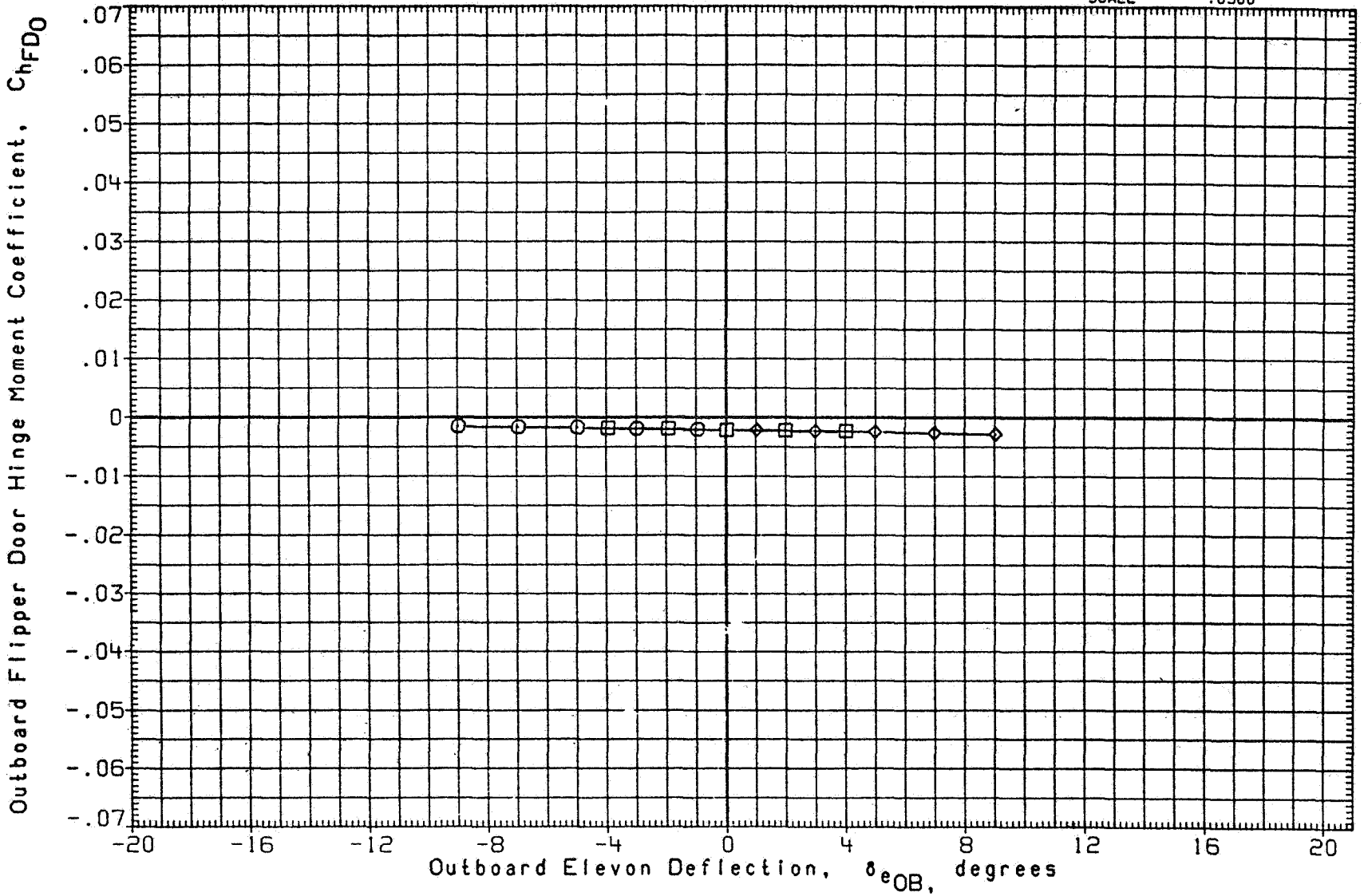


FIG.23 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE,INB'D FIX,ALPHA=15,BETA=0,AILRON=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
R2H0C6	○	AMES 118-1-87 0A145C 01
R2H0C4	□	AMES 118-1-87 0A145C 01
R2H0C5	◇	AMES 118-1-87 0A145C 01

ELEVON	SPDBRK	BDFLAP	ALPHA
-5.000	55.000	.000	15.000
000	55.000	.000	15.000
5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

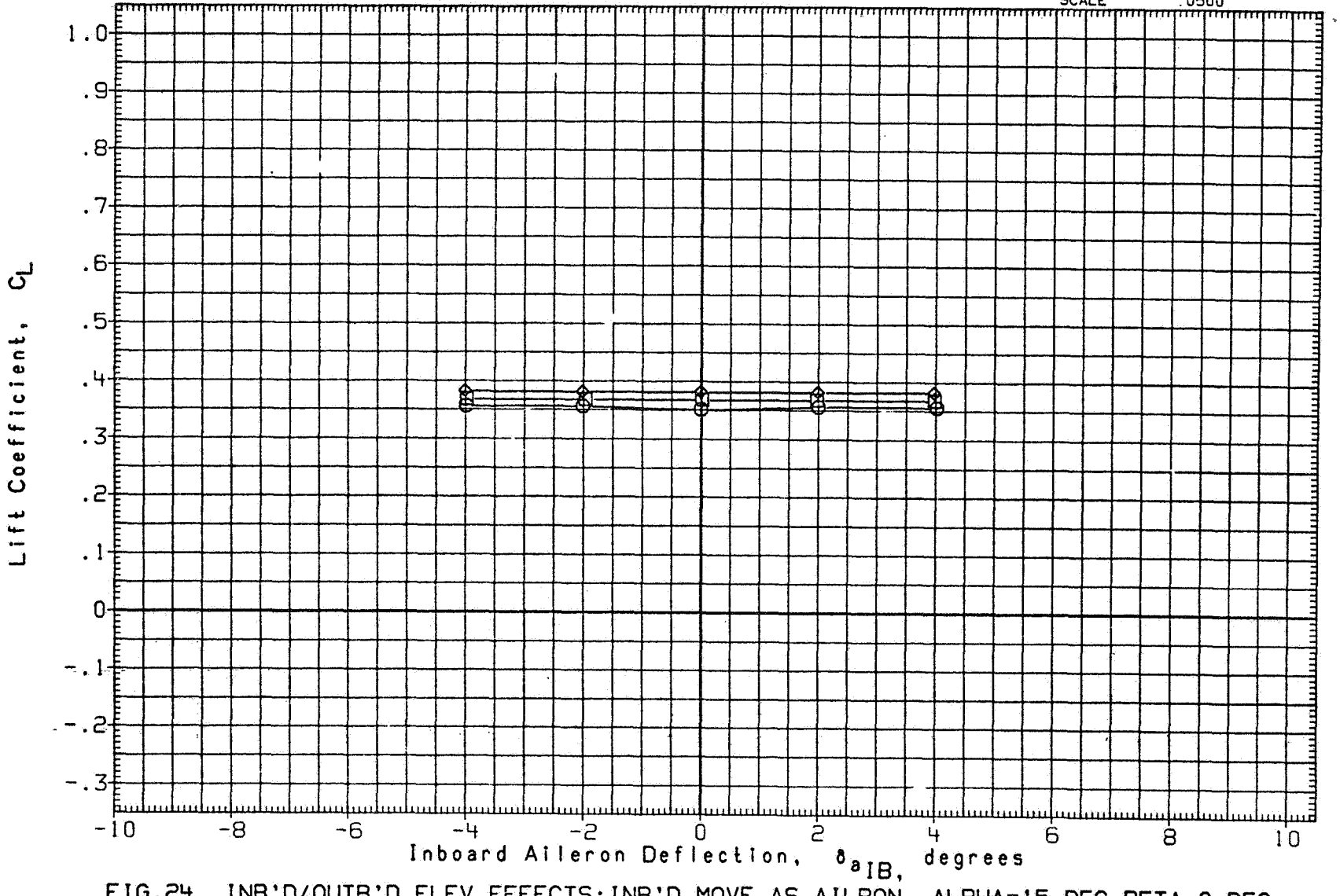


FIG.24 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE AS AILRON, ALPHA=15 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
R2H0C6	○	AMES 118-1-87 0A145C 01
R2H0C4	□	AMES 118-1-87 0A145C 01
R2H0C5	◇	AMES 118-1-87 0A145C 01

ELEVON	SPDBRK	BDFLAP	ALPHA
-5.000	55.000	.000	15.000
.000	55.000	.000	15.000
5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

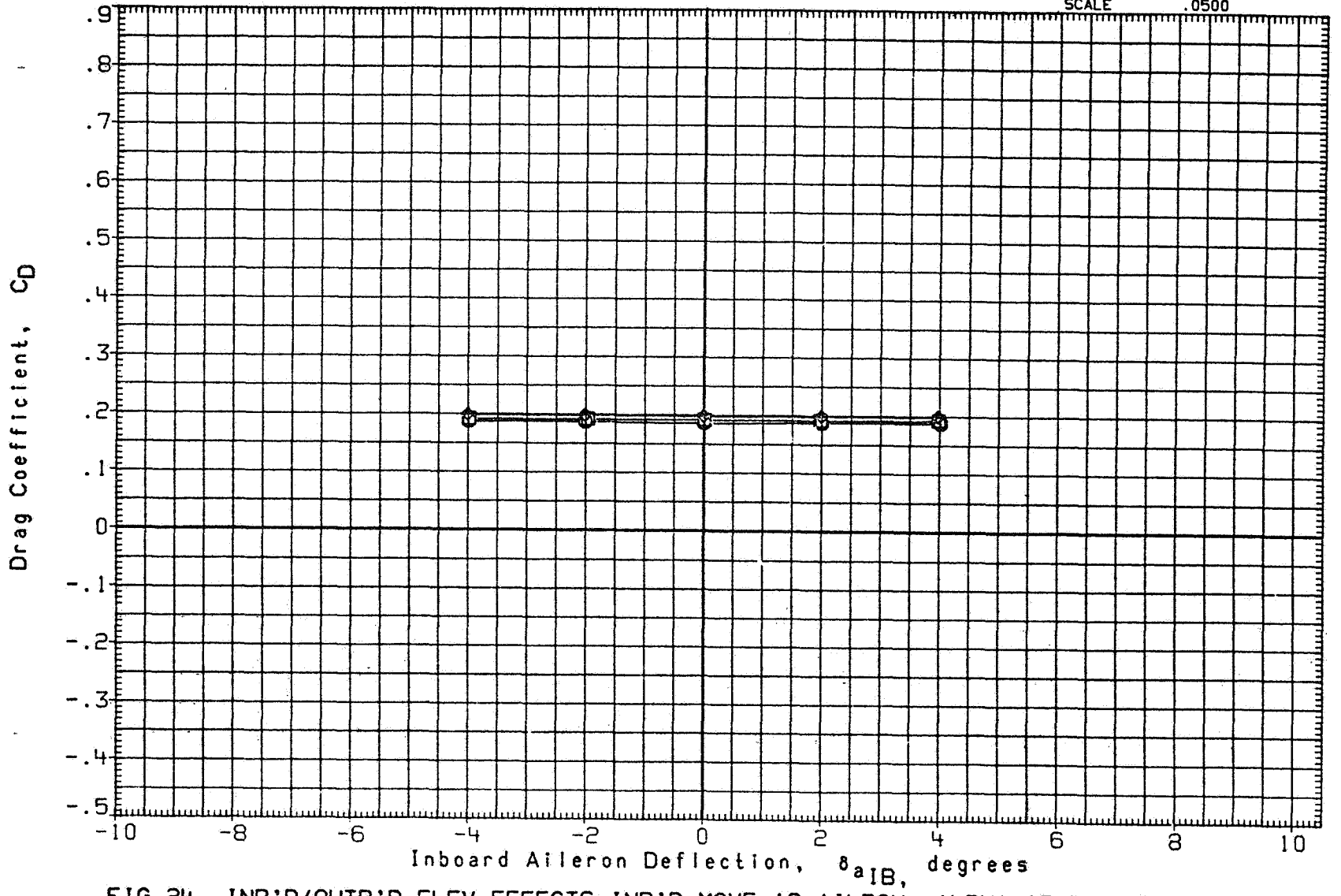


FIG.24 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE AS AILRON, ALPHA=15 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H0C6	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C4	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C5	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

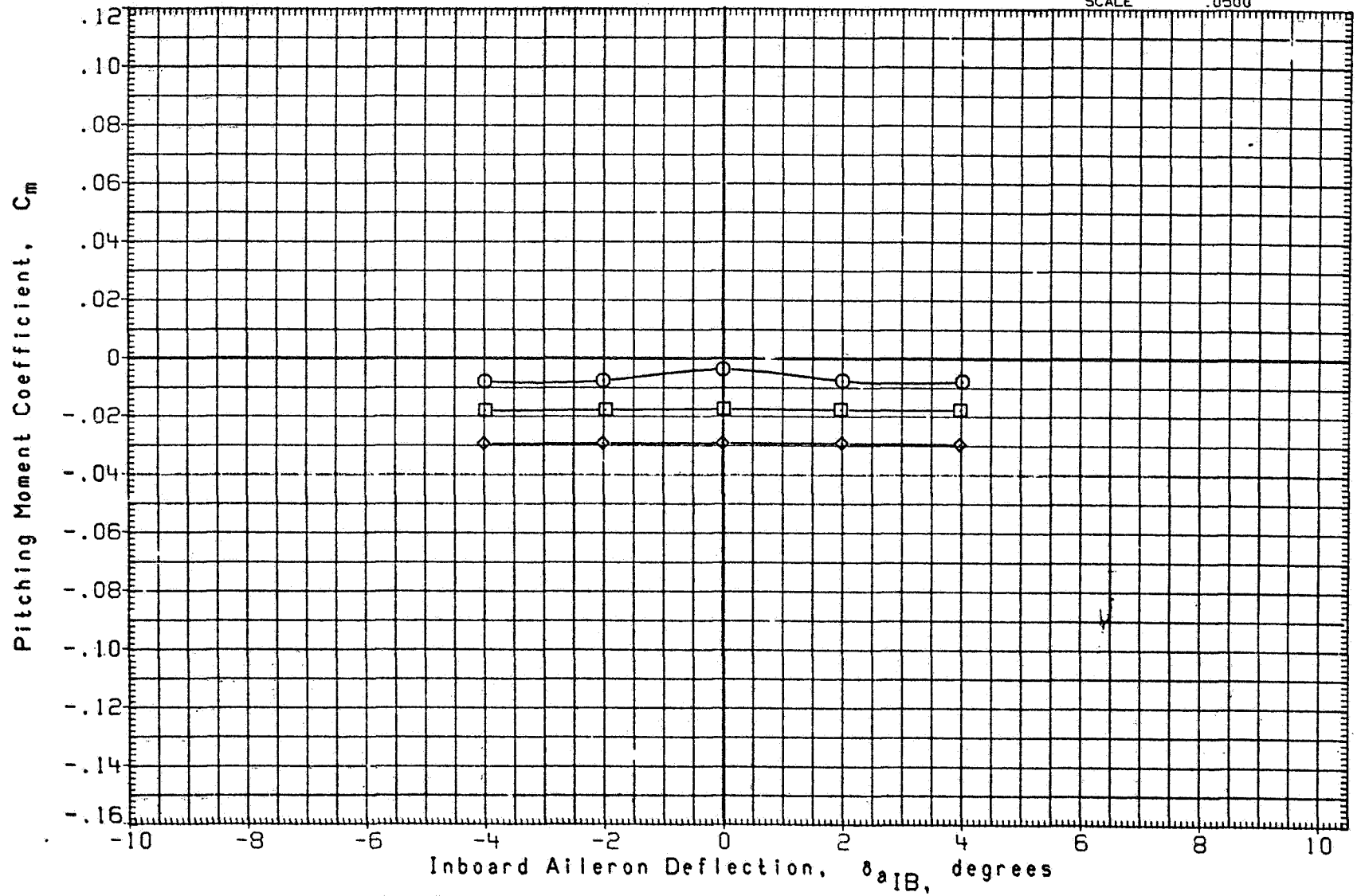


FIG.24 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE AS AILRON, ALPHA=15 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H0C6	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C4	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C5	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

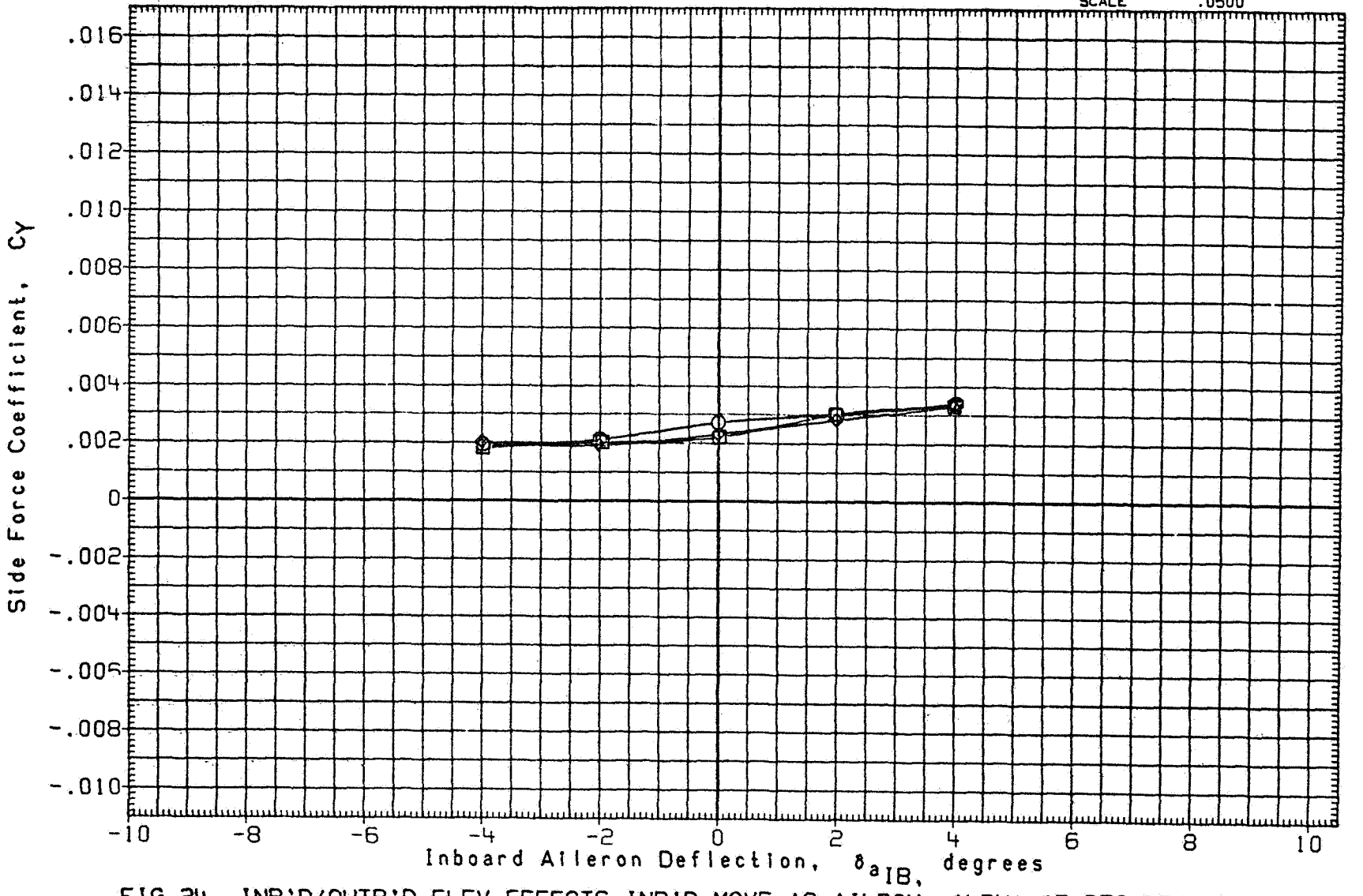


FIG.24 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE AS AILRON, ALPHA=15 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H0C6	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C4	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C5	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

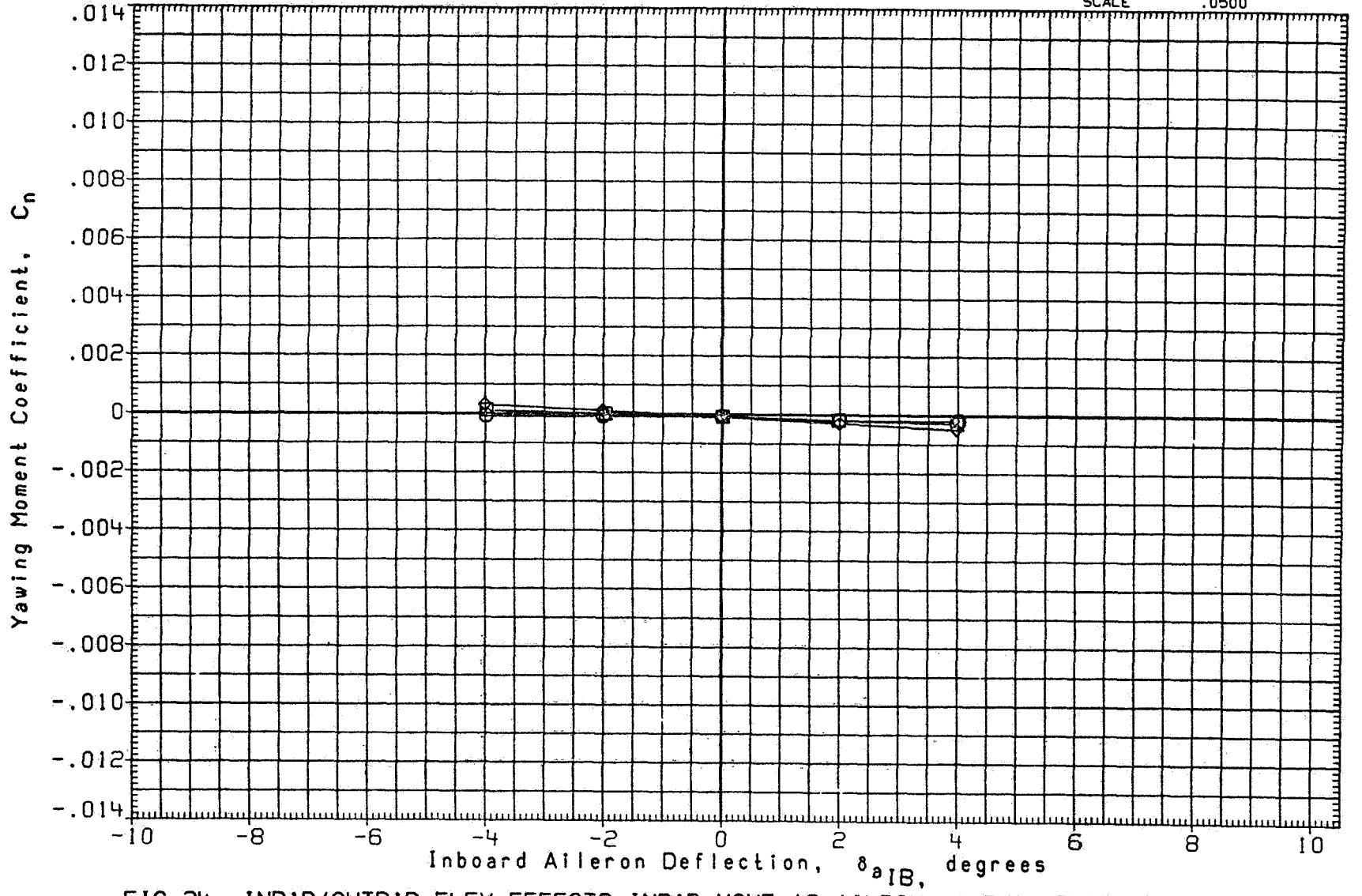


FIG.24 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE AS AILRON, ALPHA=15 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H0C6	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C4	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C5	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

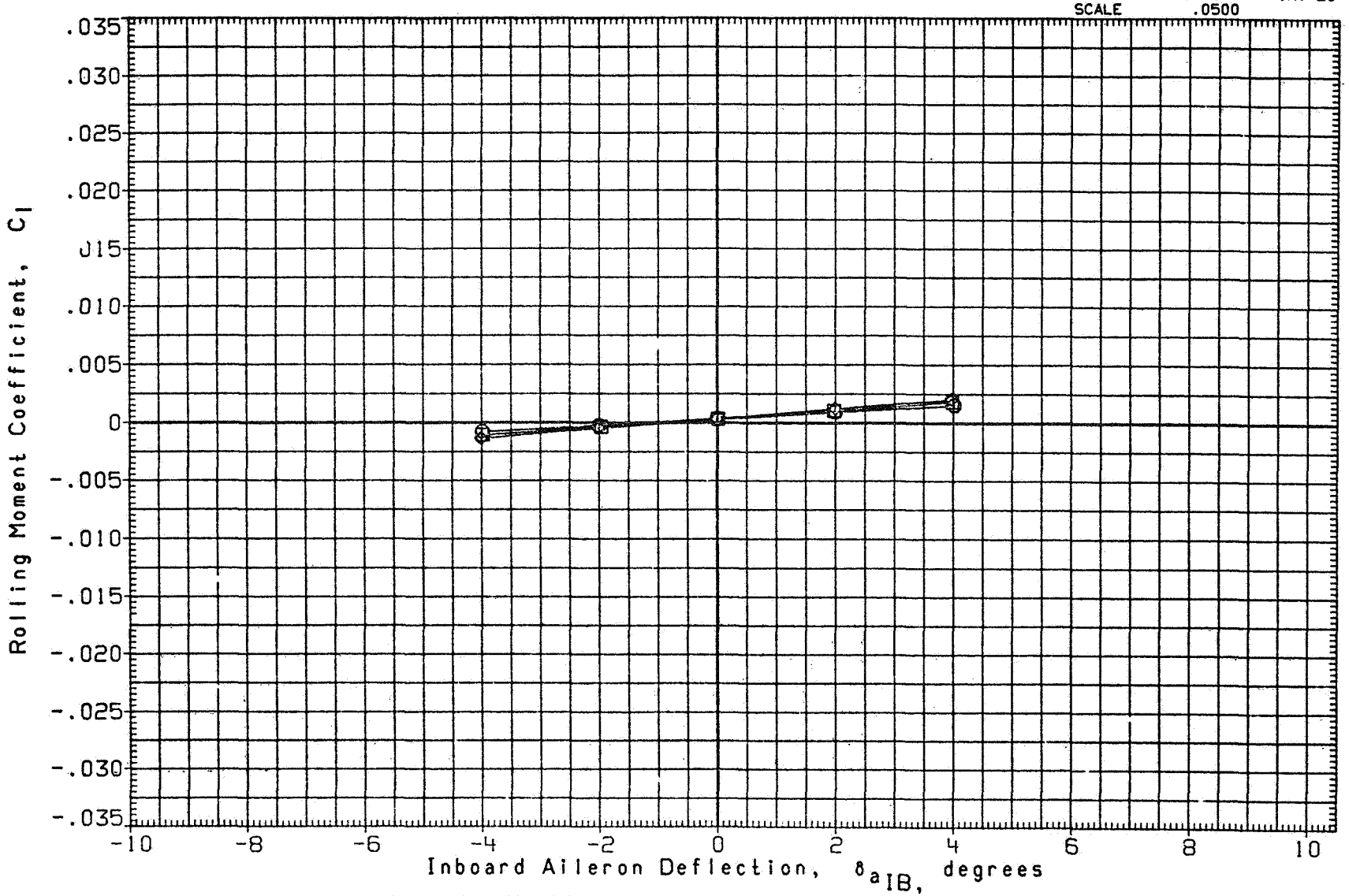


FIG.24 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE AS AILRON, ALPHA=15 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
G2H0C6	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
G2H0C4	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
G2H0C5	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

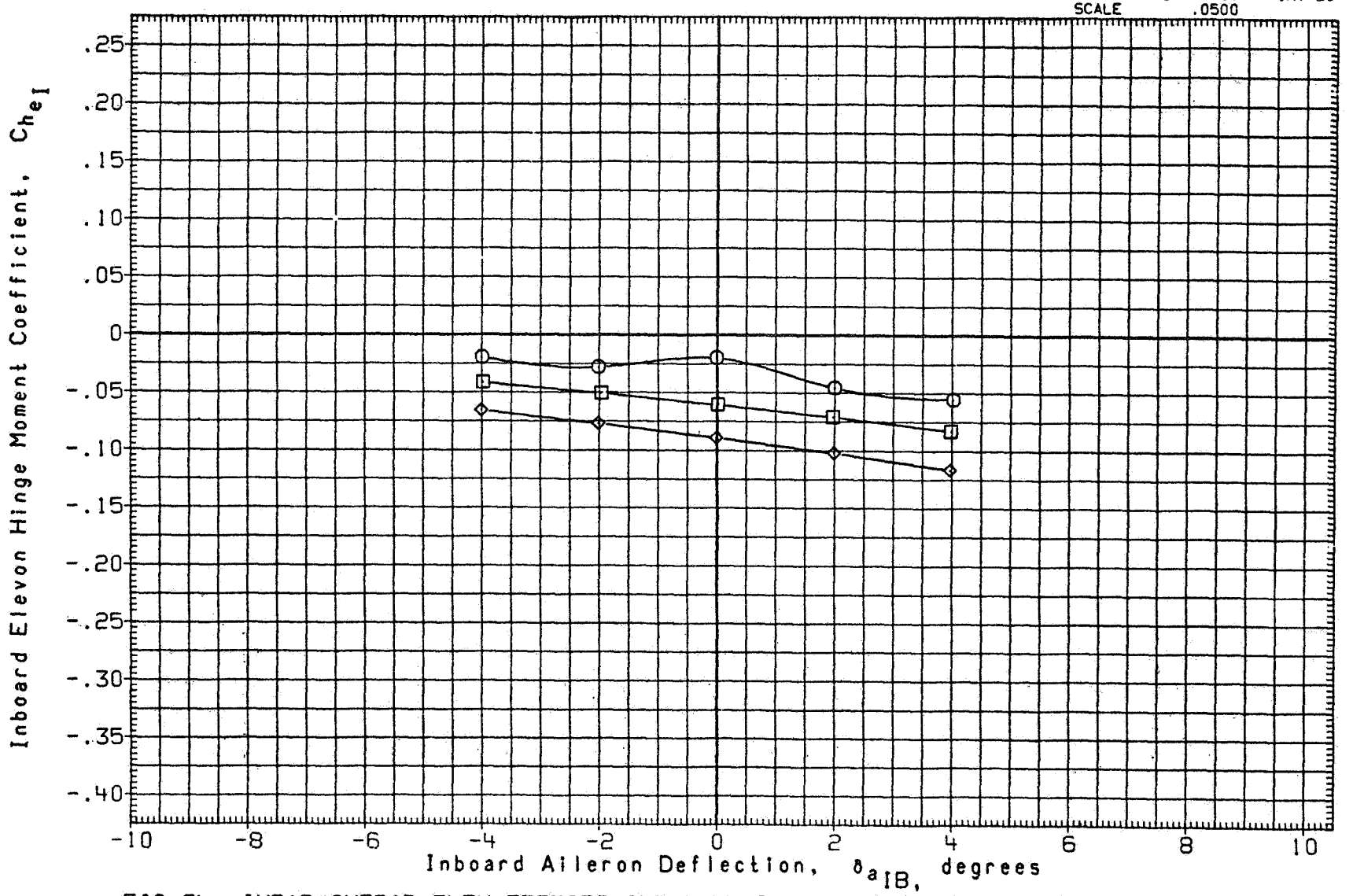


FIG.24 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE AS AILRON, ALPHA=15 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
G2H0C6	○	AMES 118-1-87 0A145C 01
G2H0C4	□	AMES 118-1-87 0A145C 01
G2H0C5	◇	AMES 118-1-87 0A145C 01

ELEVON	SPDBRK	BDFLAP	ALPHA
-5.000	55.000	.000	15.000
.000	55.000	.000	15.000
5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

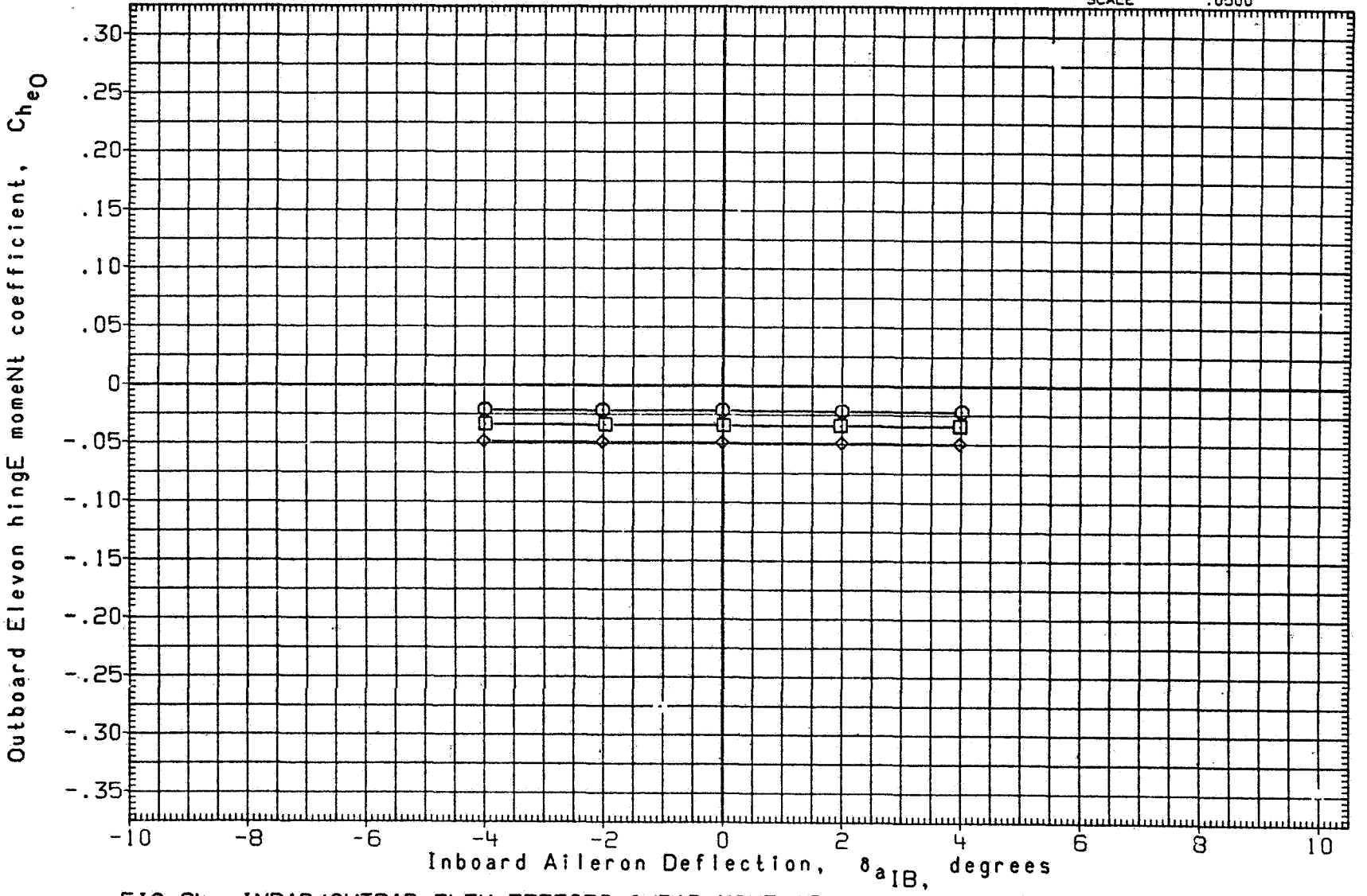


FIG.24 INB'D/OUTB'D ELEV EFFECTS: INB'D MOVE AS AILRON, ALPHA=15 DEG, BETA=0 DEG

(A) MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H0C9	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C7	□	AMES 118-1-87 0A145C 01	000	55.000	.000	15.000
R2H0C8	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

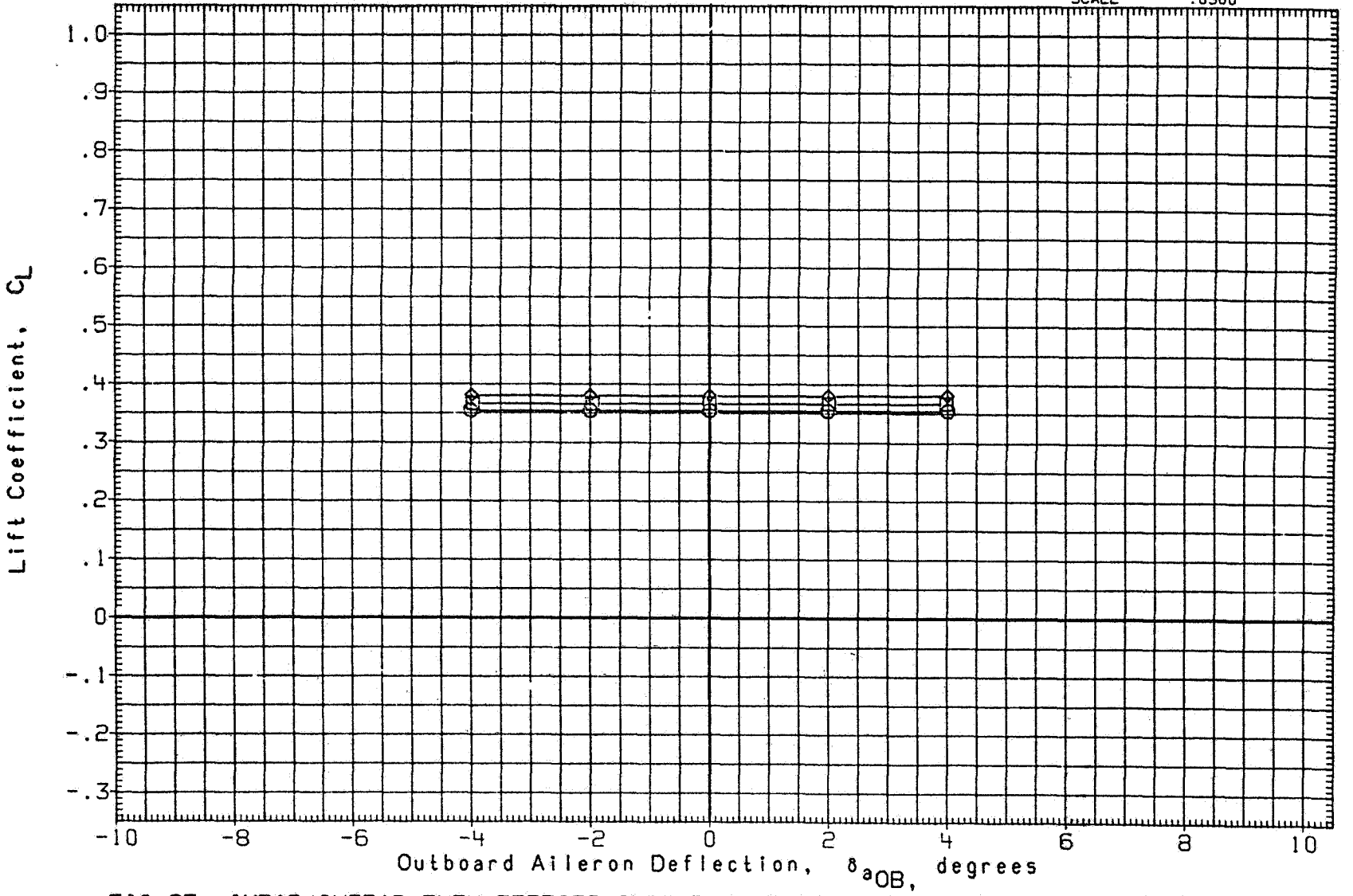


FIG.25 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE AS AILRON,ALPHA=15 DEG,BETA=0 DEG

'A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H0C9	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C7	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C8	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

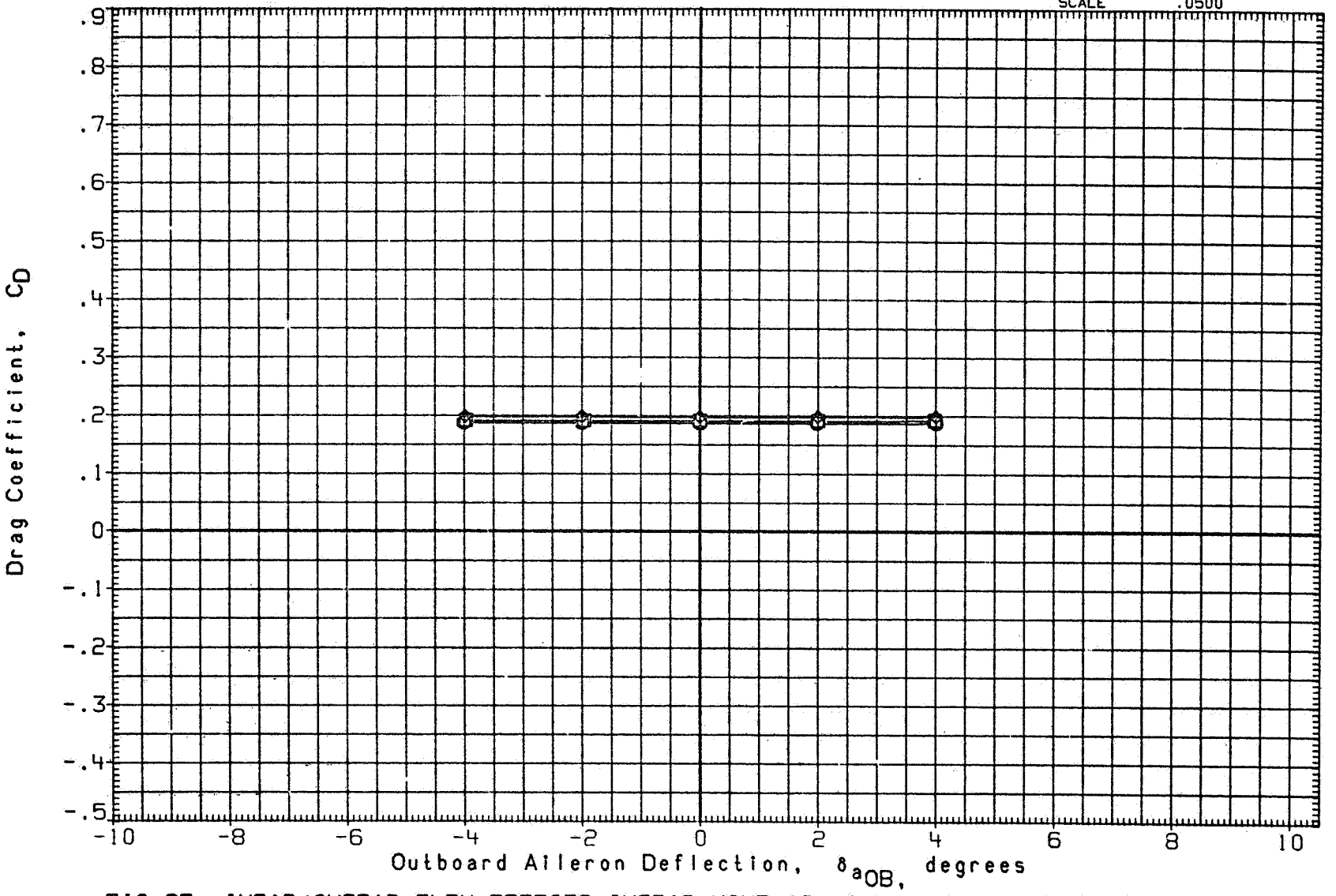


FIG.25 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE AS AILRON,ALPHA=15 DEG,BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BOFLAP	ALPHA
R2H0C9	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C7	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C8	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

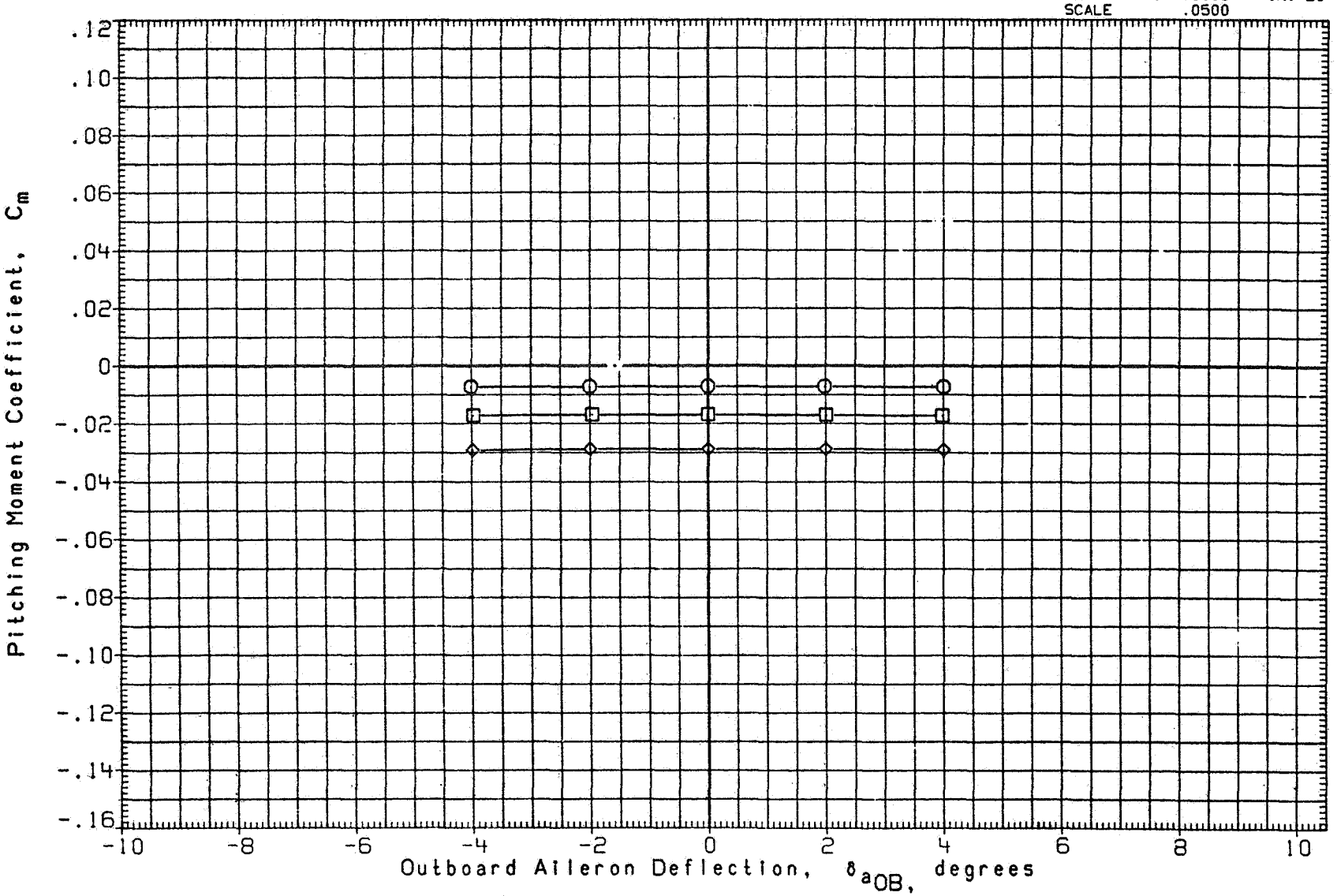


FIG.25 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE AS AILRON,ALPHA=15 DEG,BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H0C9	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C7	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C8	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

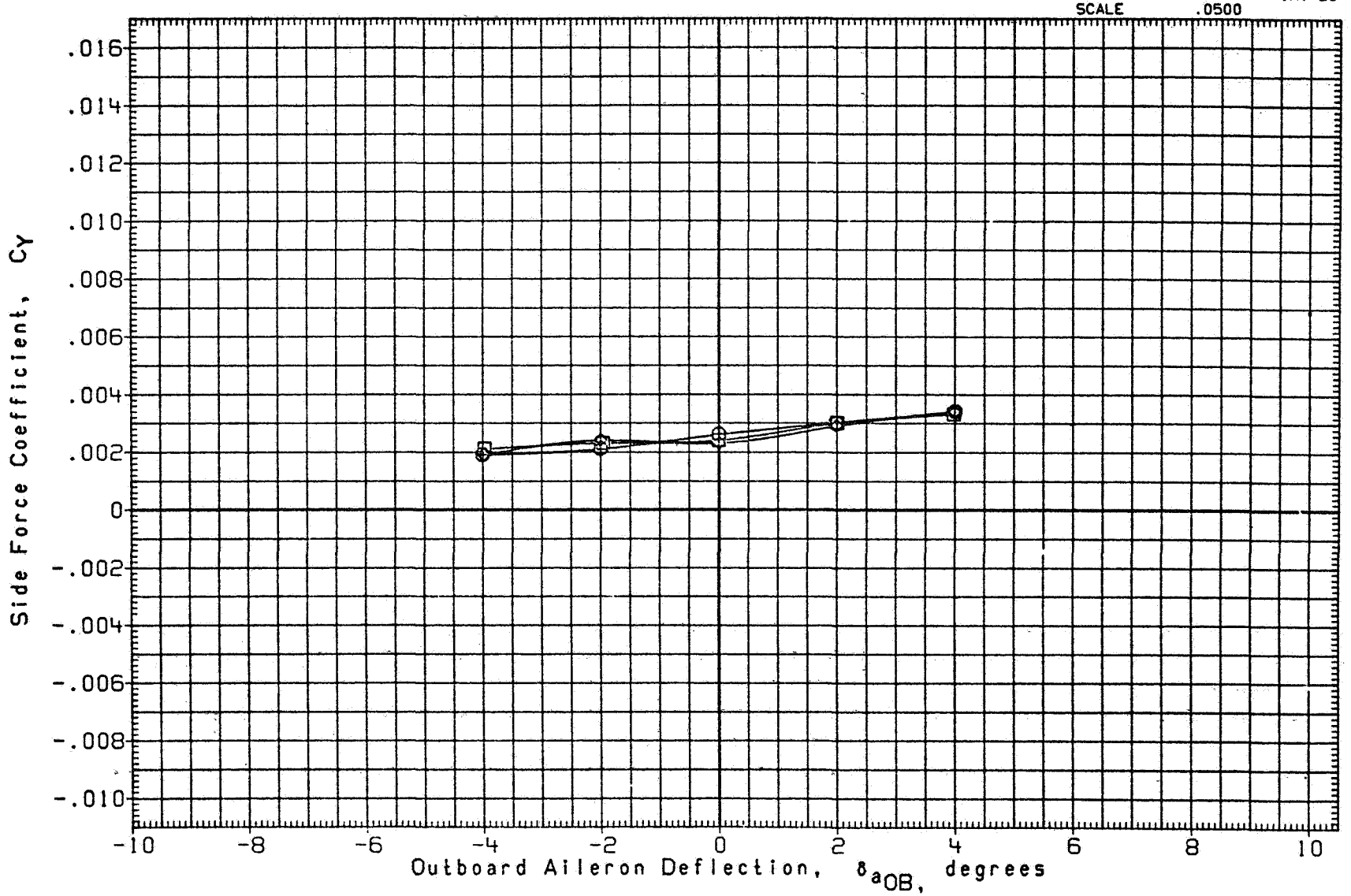


FIG.25 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE AS AILRON,ALPHA=15 DEG,BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H0C9	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C7	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C8	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

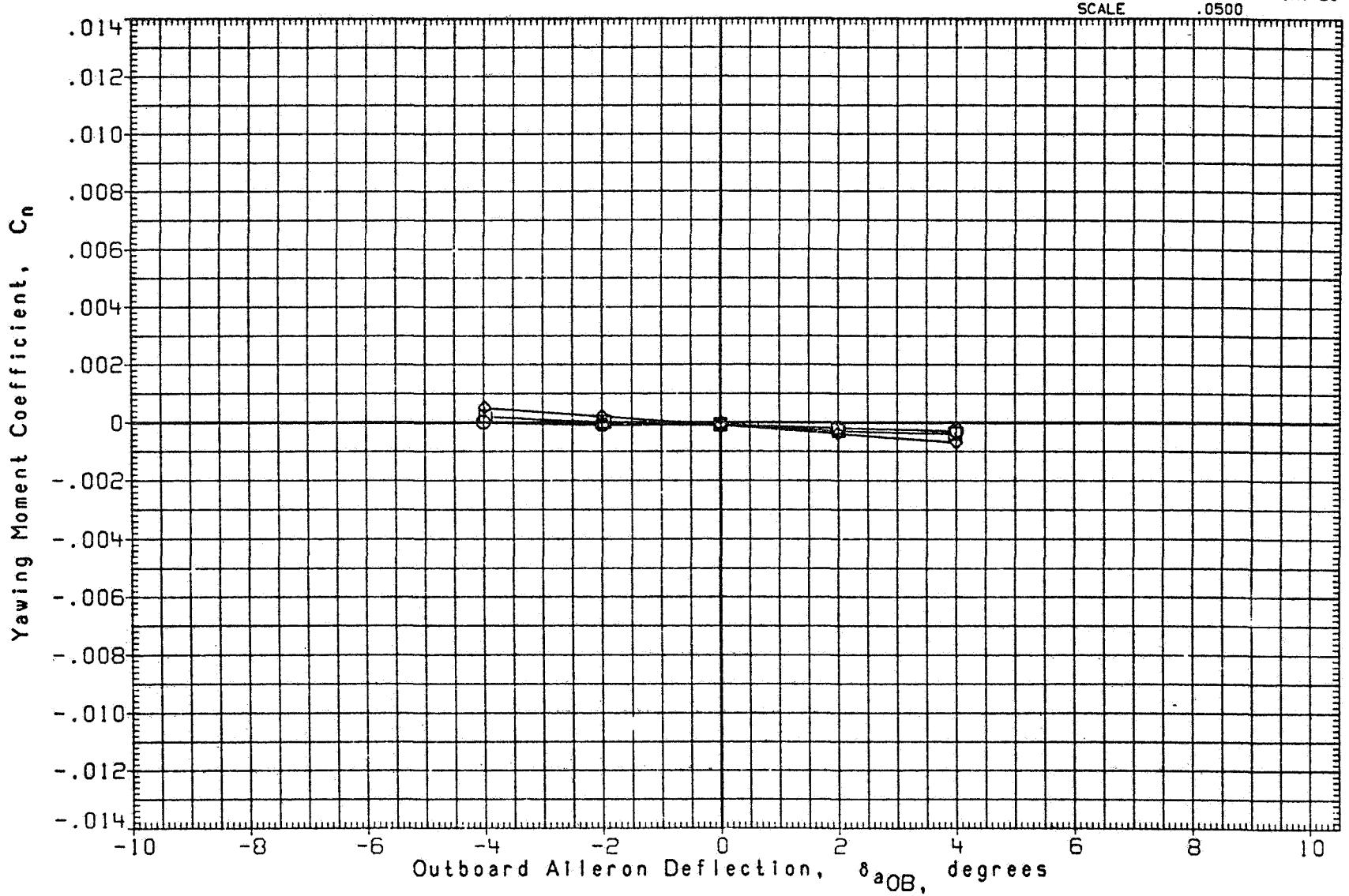


FIG.25 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE AS AILRON,ALPHA=15 DEG,BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H0C9	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
R2H0C7	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H0C8	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

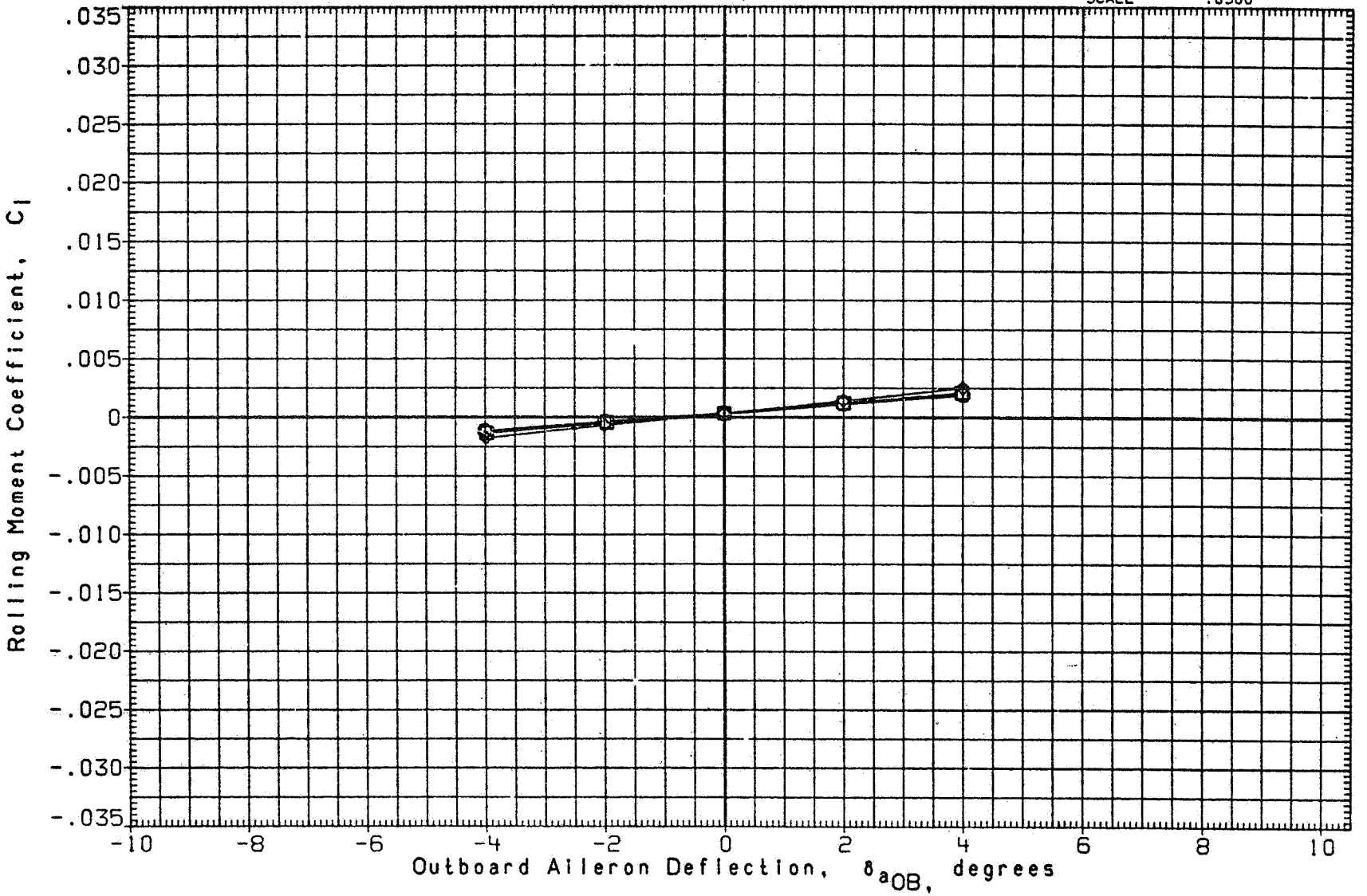


FIG.25 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE AS AILRON,ALPHA=15 DEG,BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
G2H0C9	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
G2H0C7	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
G2H0C8	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

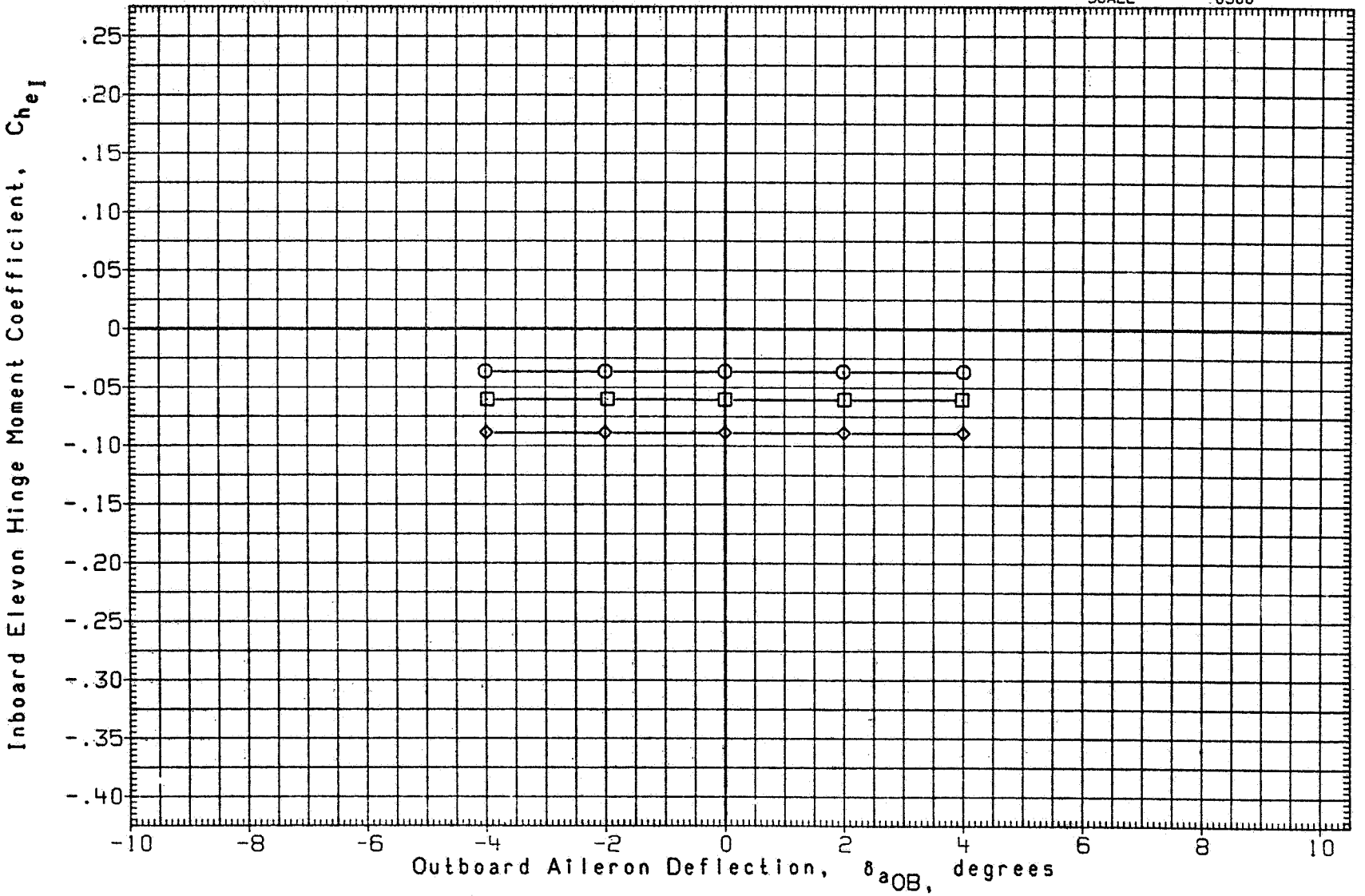


FIG.25 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE AS AILRON,ALPHA=15 DEG,BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
G2H0C9	○	AMES 118-1-87 0A145C 01	-5.000	55.000	.000	15.000
G2H0C7	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
G2H0C8	◇	AMES 118-1-87 0A145C 01	5.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

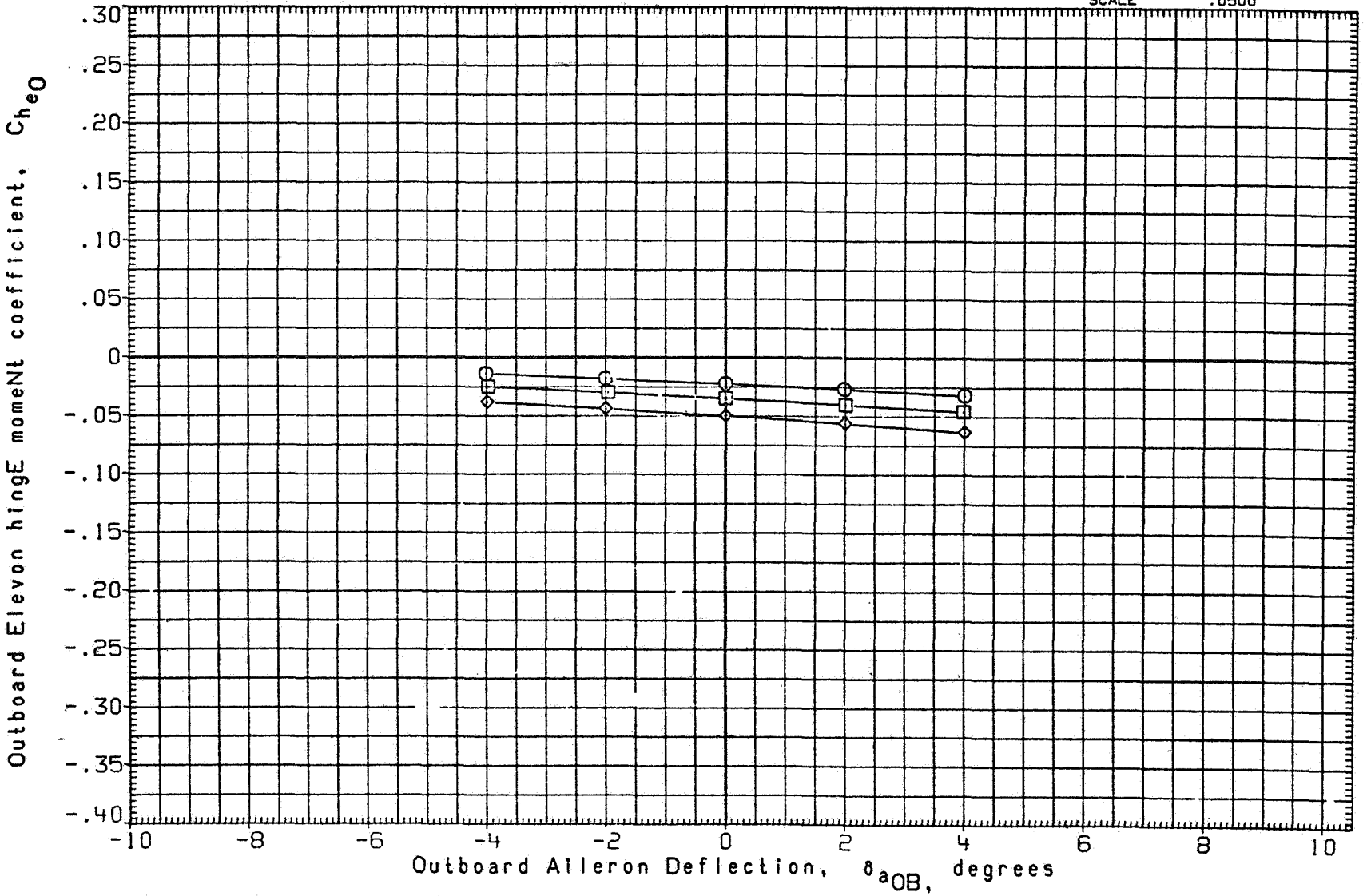


FIG.25 INB'D/OUTB'D ELEV EFFECTS:OUTB'D MOVE AS AILRON,ALPHA=15 DEG,BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	SPDBRK	BDFLAP
R2H0B0	O	AMES 118-1-87 0A145C 01	15.000	.000	55.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

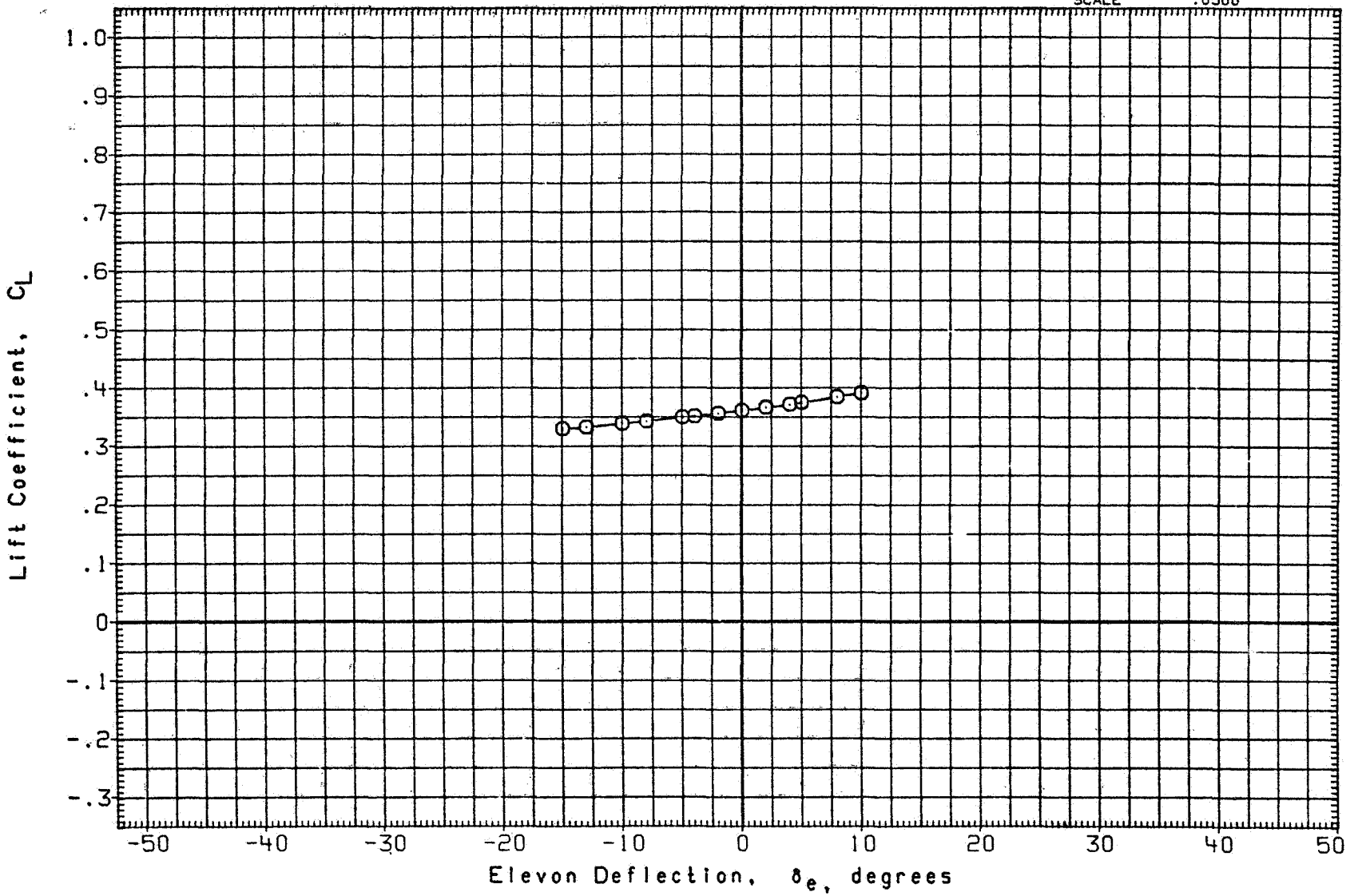


FIG.26 CONTROL SURF INTERACTIONS:ELEV VARY,BDFLP=-11.7,SDBRK=55,RUD=0,BETA=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	SPDBRK	BDFLAP
R2H0B0	O	AMES 118-1-87 0A145C 01	15.000	.000	55.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

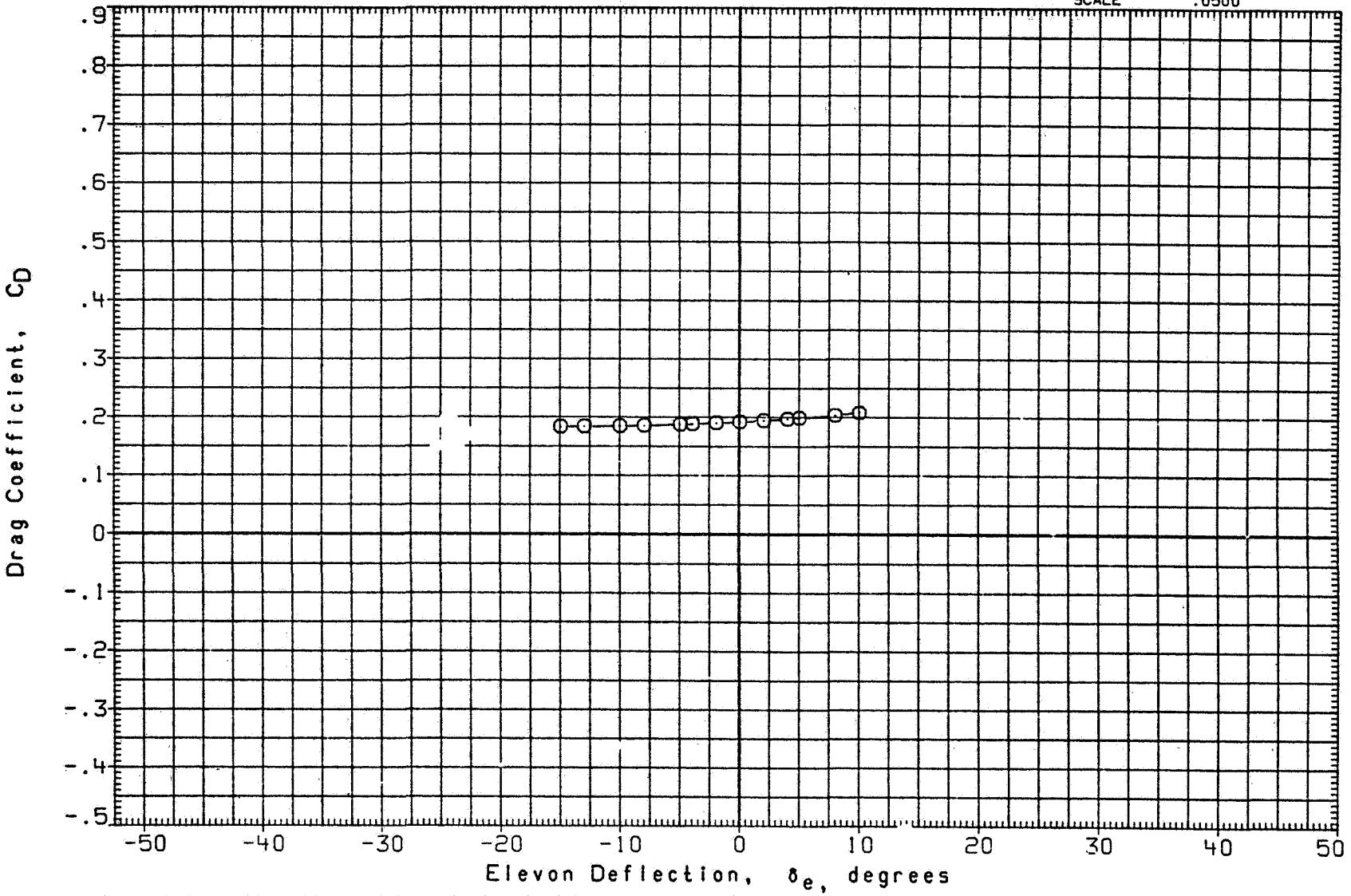


FIG.26 CONTROL SURF INTERACTIONS:ELEV VARY,BDFLP=-11.7,SDBRK=55,RUD=0,BETA=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	SPDBRK	BDFLAP
R2H080	O	AMES 118-1-87 0A145C 01	15.000	.000	55.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

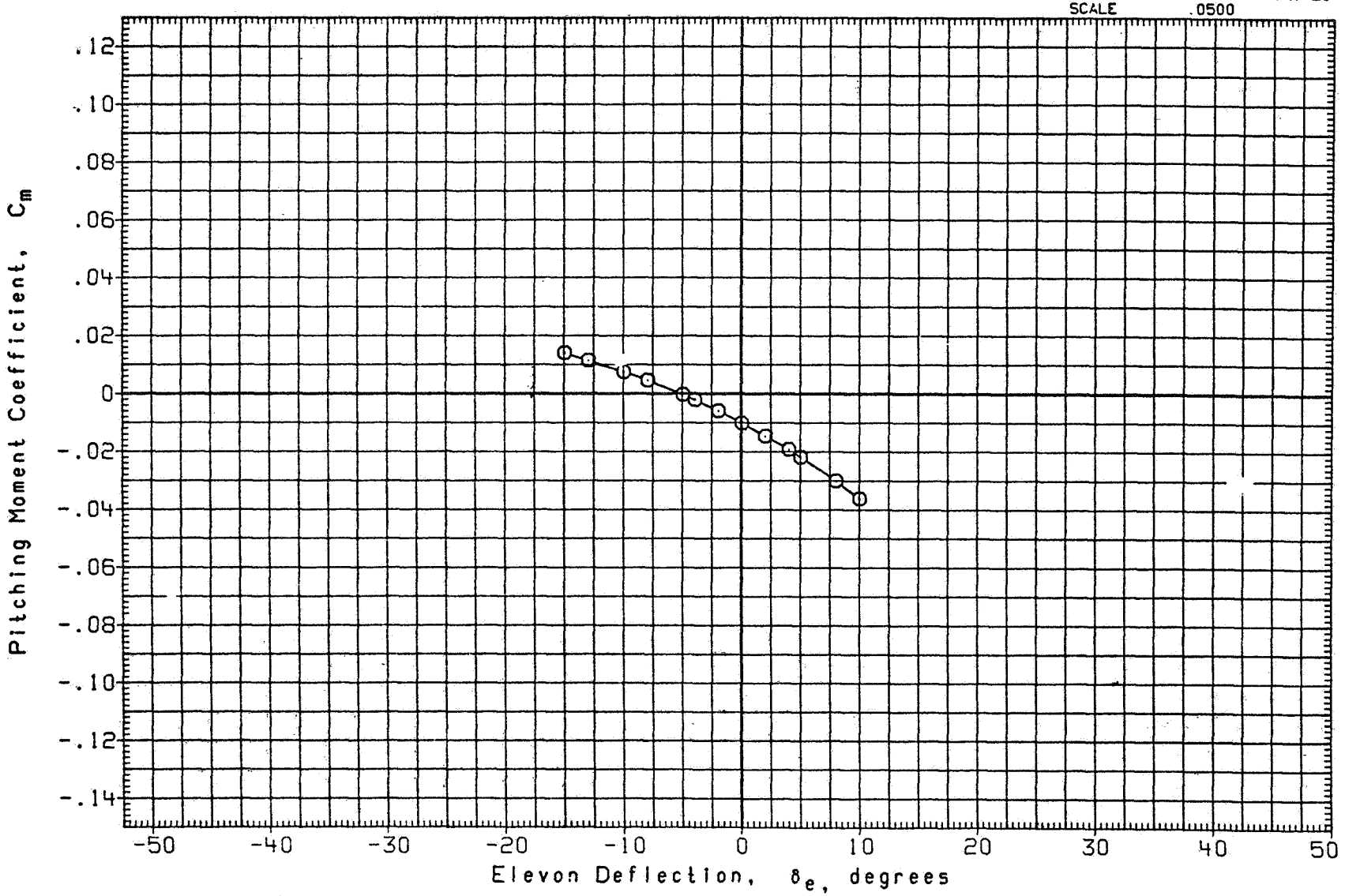


FIG.26 CONTROL SURF INTERACTIONS:ELEV VARY,BDFLP=-11.7,SDBRK=55,RUD=0,BETA=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	SPDBRK	BDFLAP
R2H081	O	AMES 118-1-87 OA145C 01	15.000	.000	55.000	16.300

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

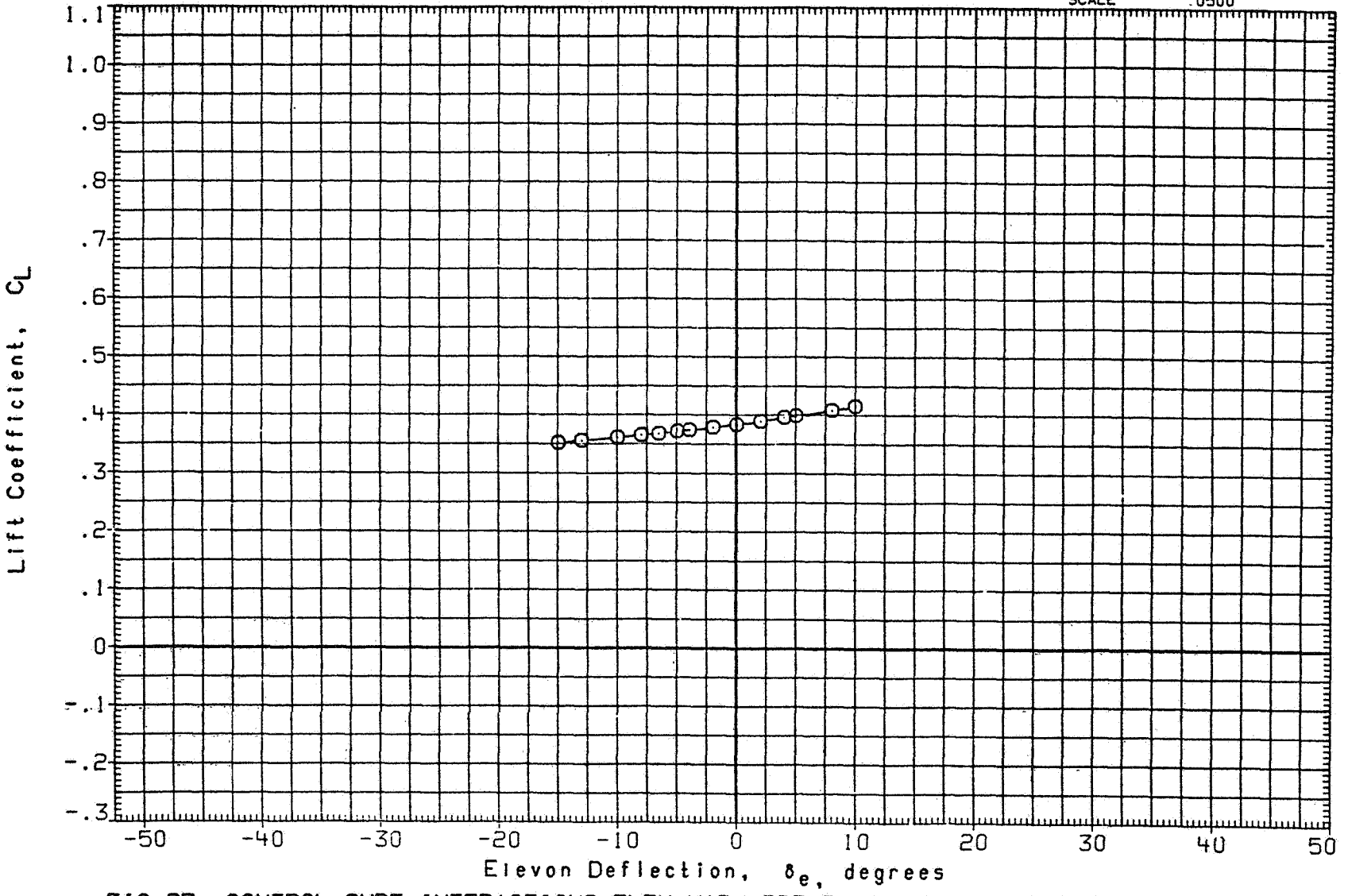


FIG.27 CONTROL SURF INTERACTIONS:ELEV VARY,BDFLP=16.3,SDBRK=55,RUD=0,BETA=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	SPDBRK	BDFLAP
R2H0B1	O	AMES 118-1-87 0A145C 01	15.000	.000	55.000	16.300

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

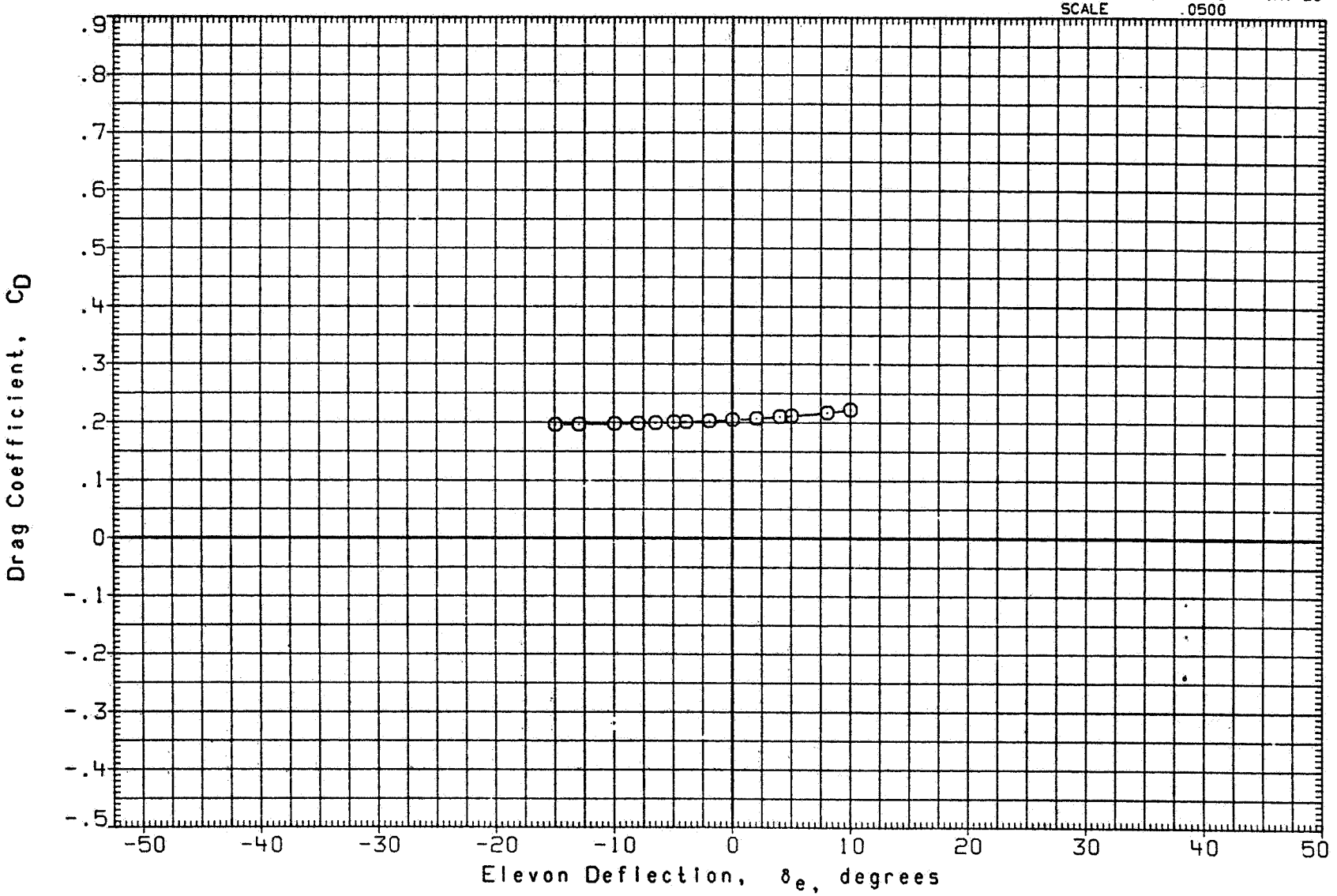


FIG.27 CONTROL SURF INTERACTIONS:ELEV VARY,BDFLP=16.3,SDBRK=55,RUD=0,BETA=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	SPDBRK	BDFLAP
R2H0B1	O	AMES 118-1-87 0A145C 01	15.000	.000	55.000	16.300

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

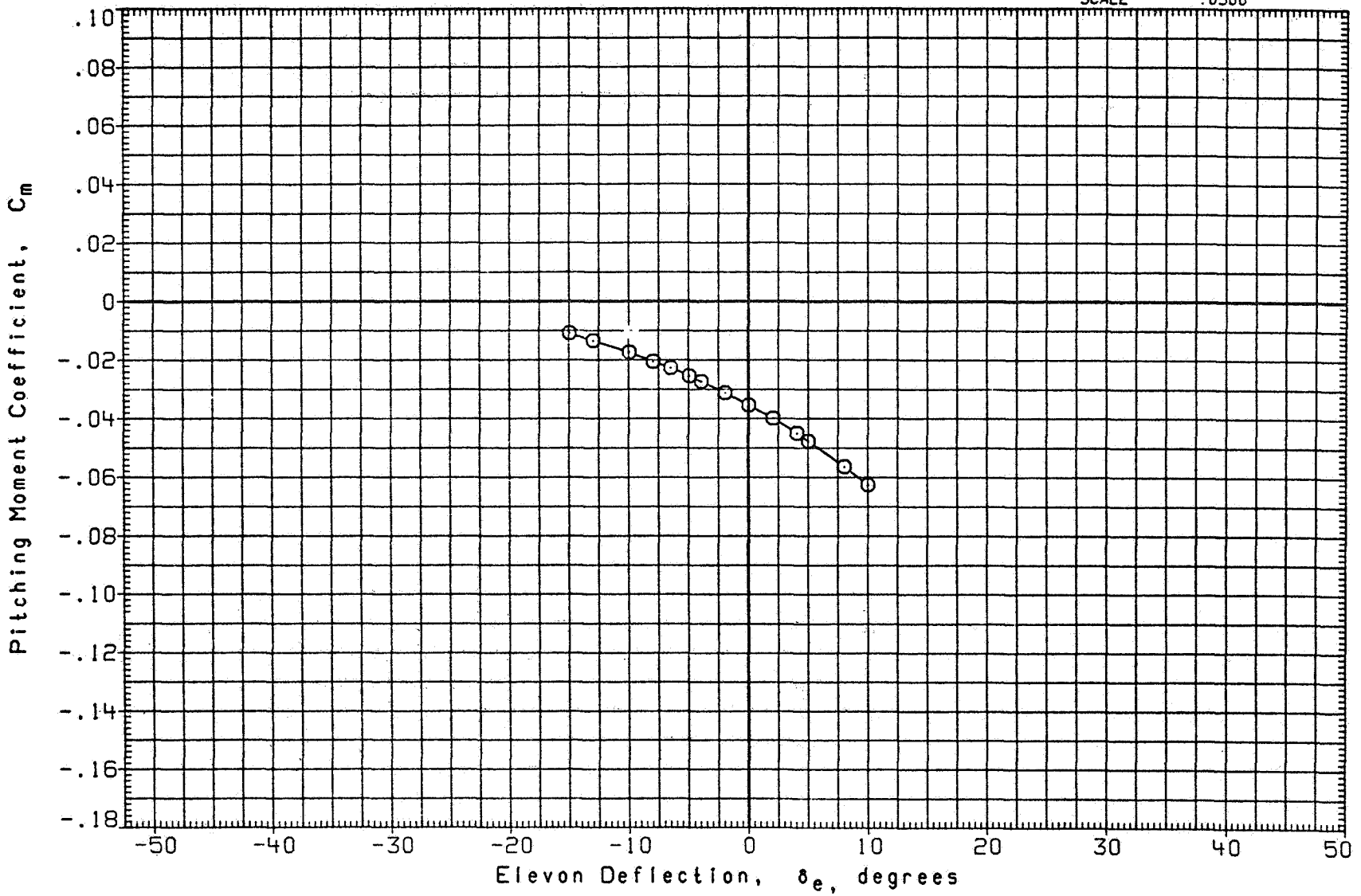


FIG.27 CONTROL SURF INTERACTIONS:ELEV VARY,BDFLP=16.3,SDBRK=55,RUD=0,BETA=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H0B4	○	AMES 118-1-87 0A145C 01	.000	-10.000	55.000	-11.700
R2H0B5	□	AMES 118-1-87 0A145C 01	.000	-10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

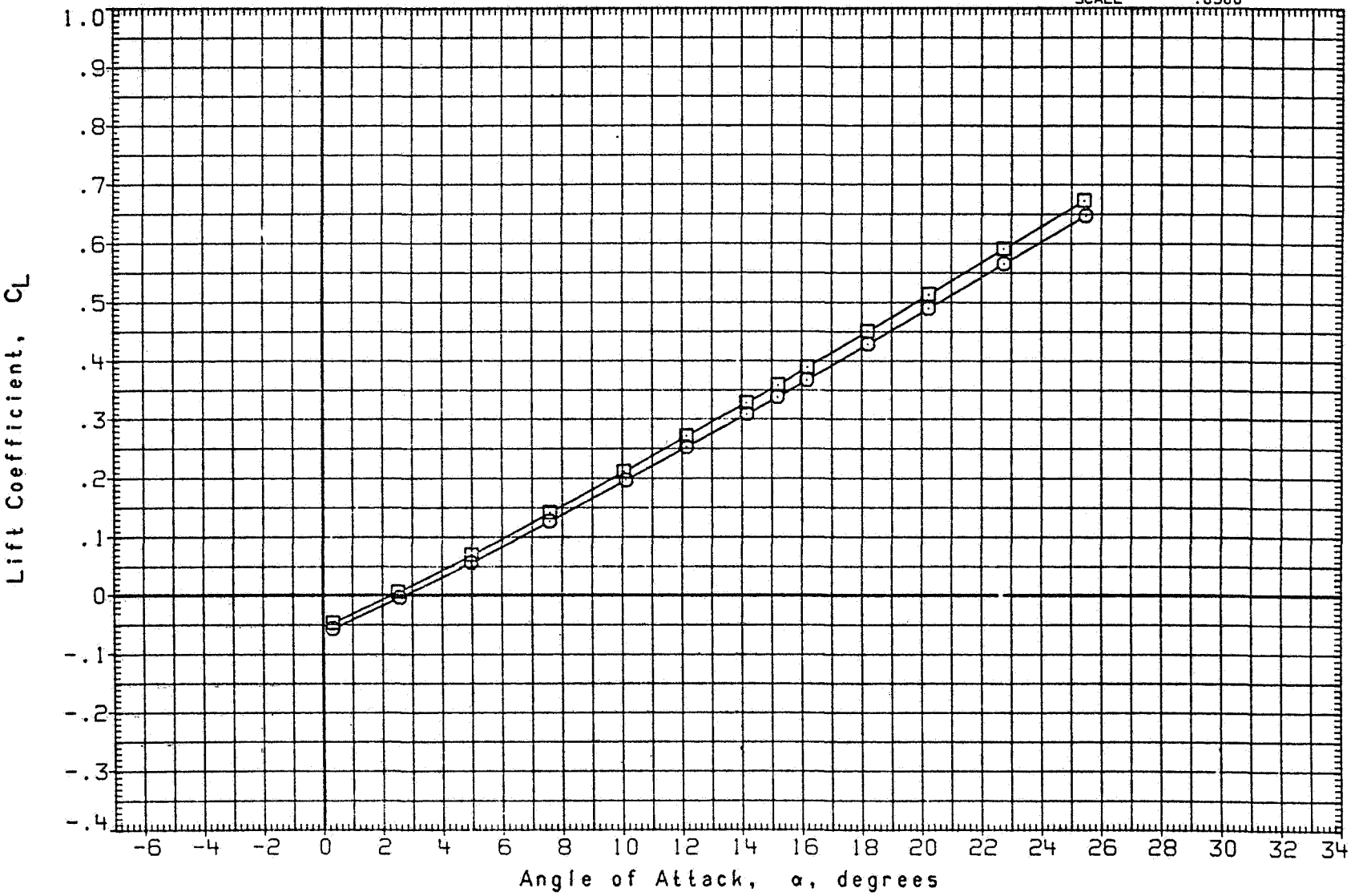


FIG.28 CONTROL SURF INTERACTIONS:ELEV=-10,BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H0B4	○	AMES 118-1-87 0A145C 01	000	-10.000	55.000	-11.700
R2H0B5	□	AMES 118-1-87 0A145C 01	.000	-10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

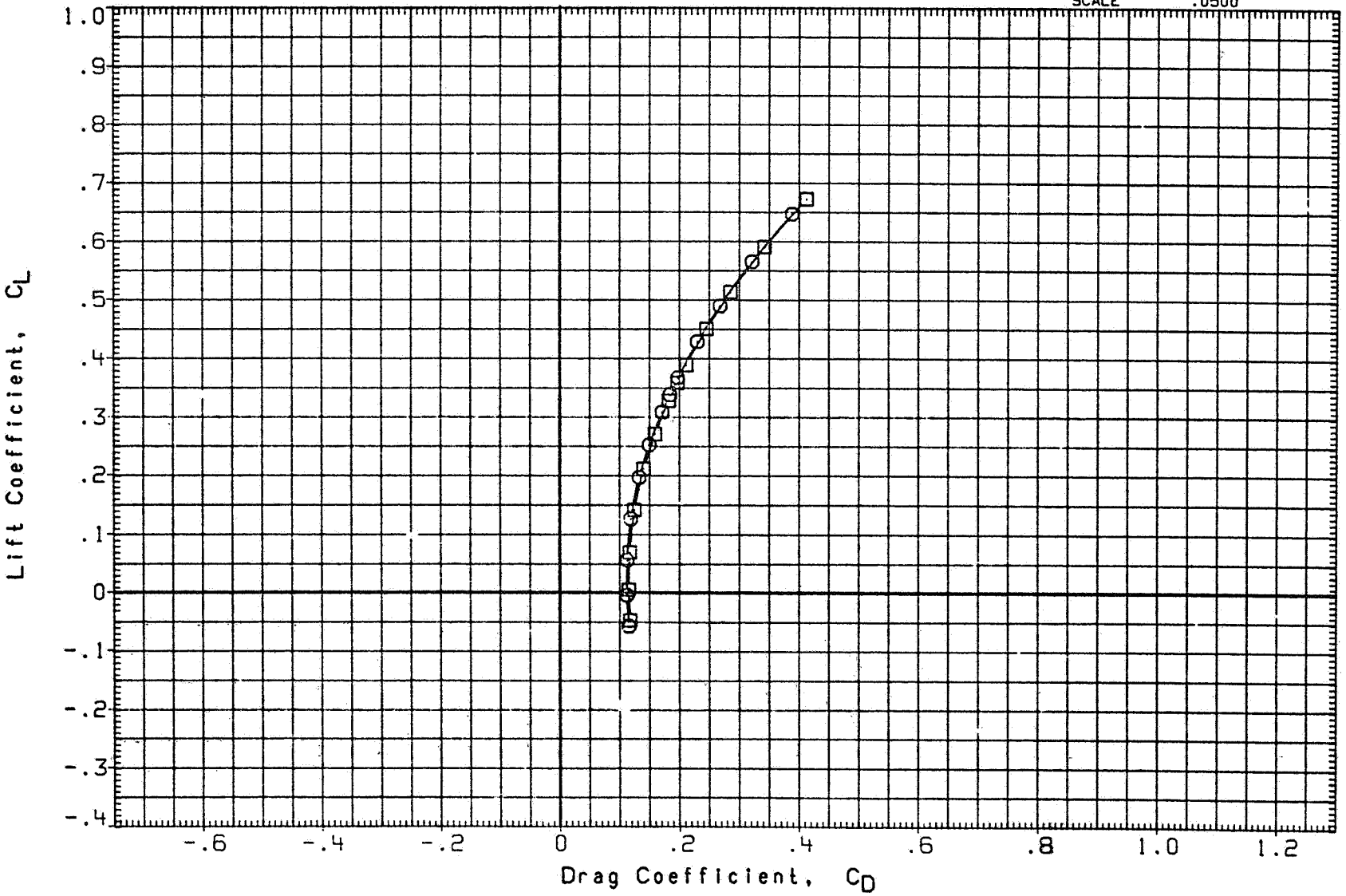


FIG.28 CONTROL SURF INTERACTIONS:ELEV=-10,BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H0B4	○	AMES 118-1-87 0A145C 01	.000	-10.000	55.000	-11.700
R2H0B5	□	AMES 118-1-87 0A145C 01	.000	-10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

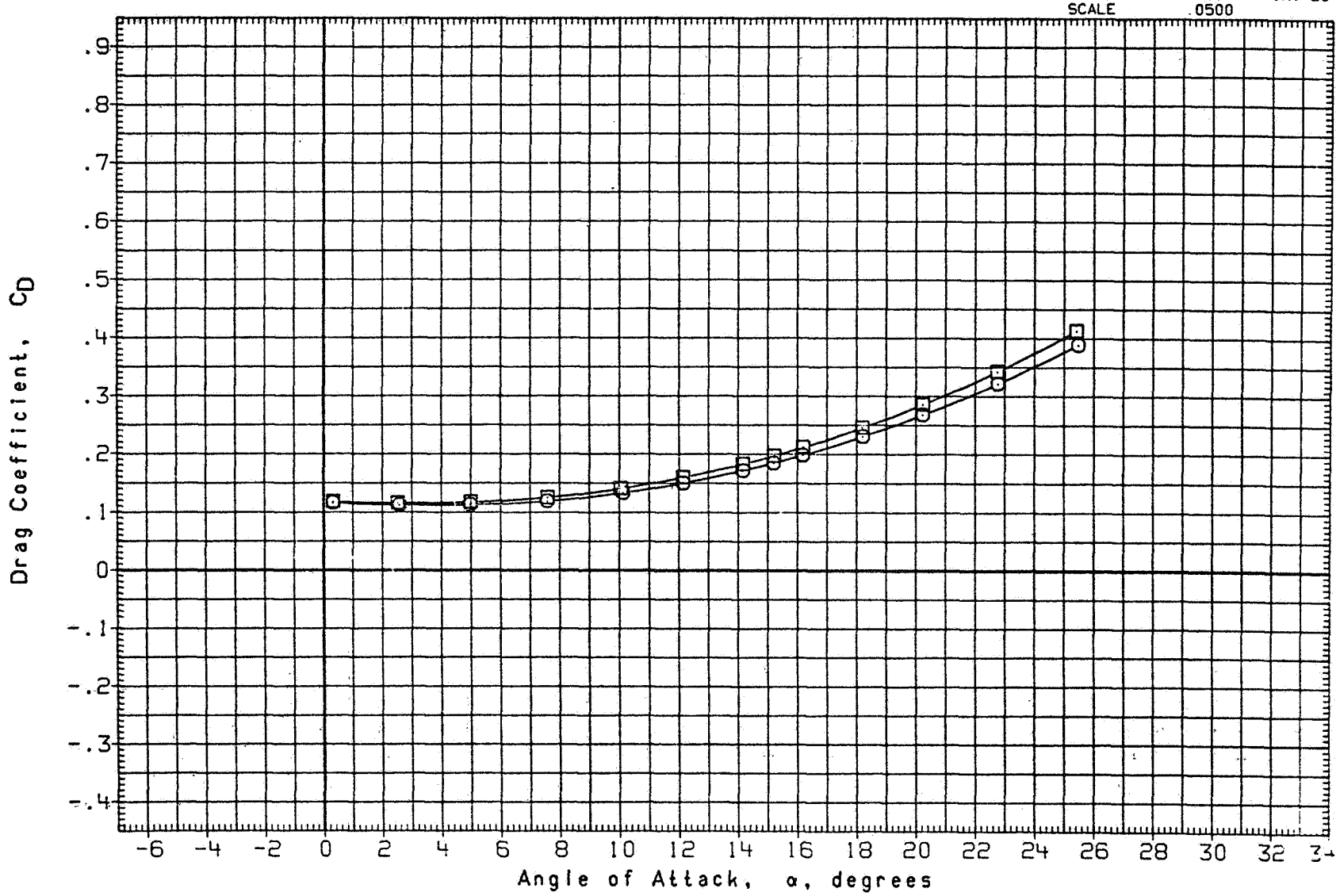


FIG.28 CONTROL SURF INTERACTIONS:ELEV=-10,BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H084	○	AMES 118-1-87 0A145C 01	.000	-10.000	55.000	-11.700
R2H085	□	AMES 118-1-87 0A145C 01	.000	-10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	674.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

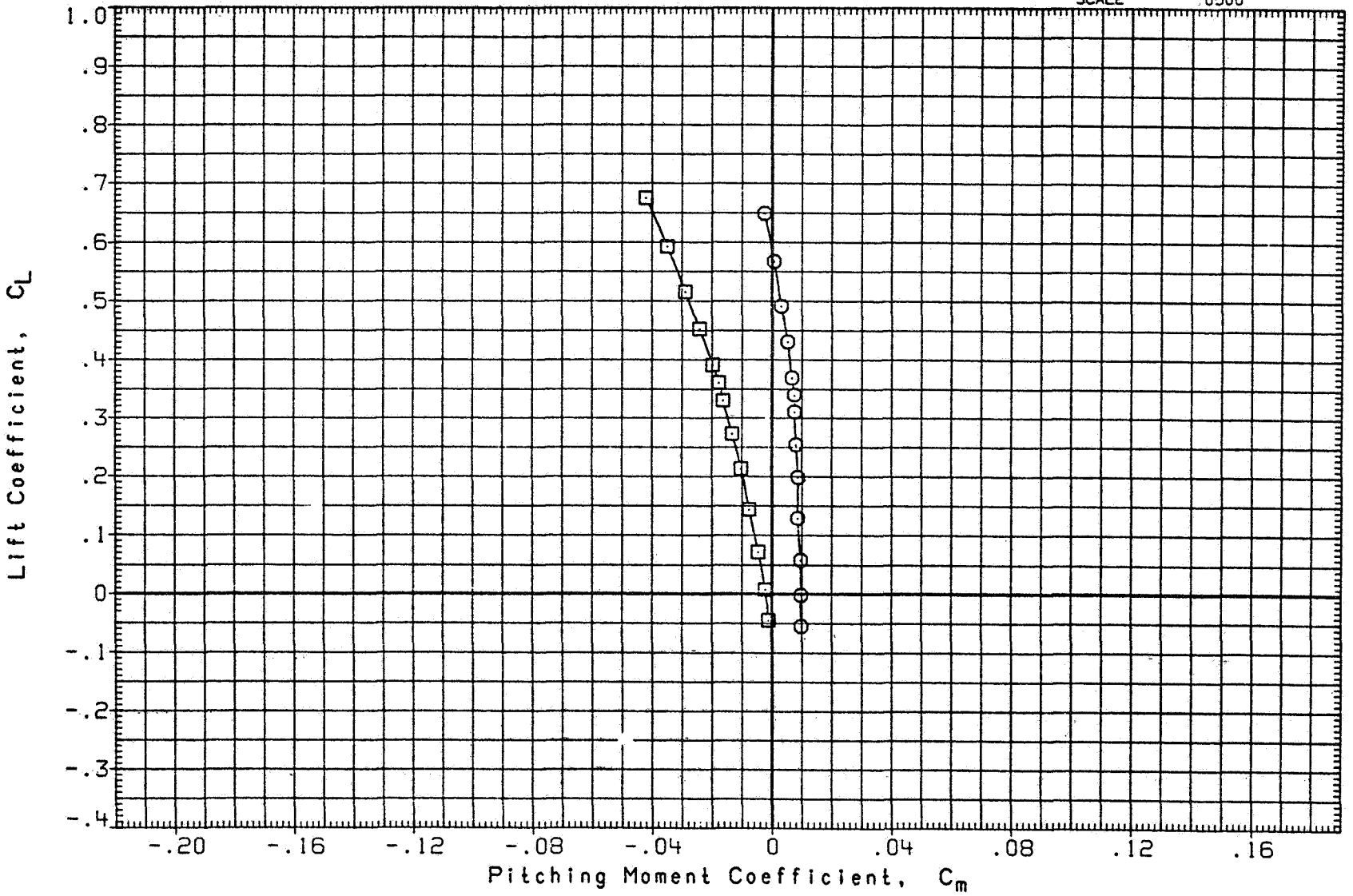


FIG.28 CONTROL SURF INTERACTIONS:ELEV=-10,BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H0B4	○	AMES 118-1-87 0A145C 01	.000	-10.000	55.000	-11.700
R2H0B5	□	AMES 118-1-87 0A145C 01	.000	-10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

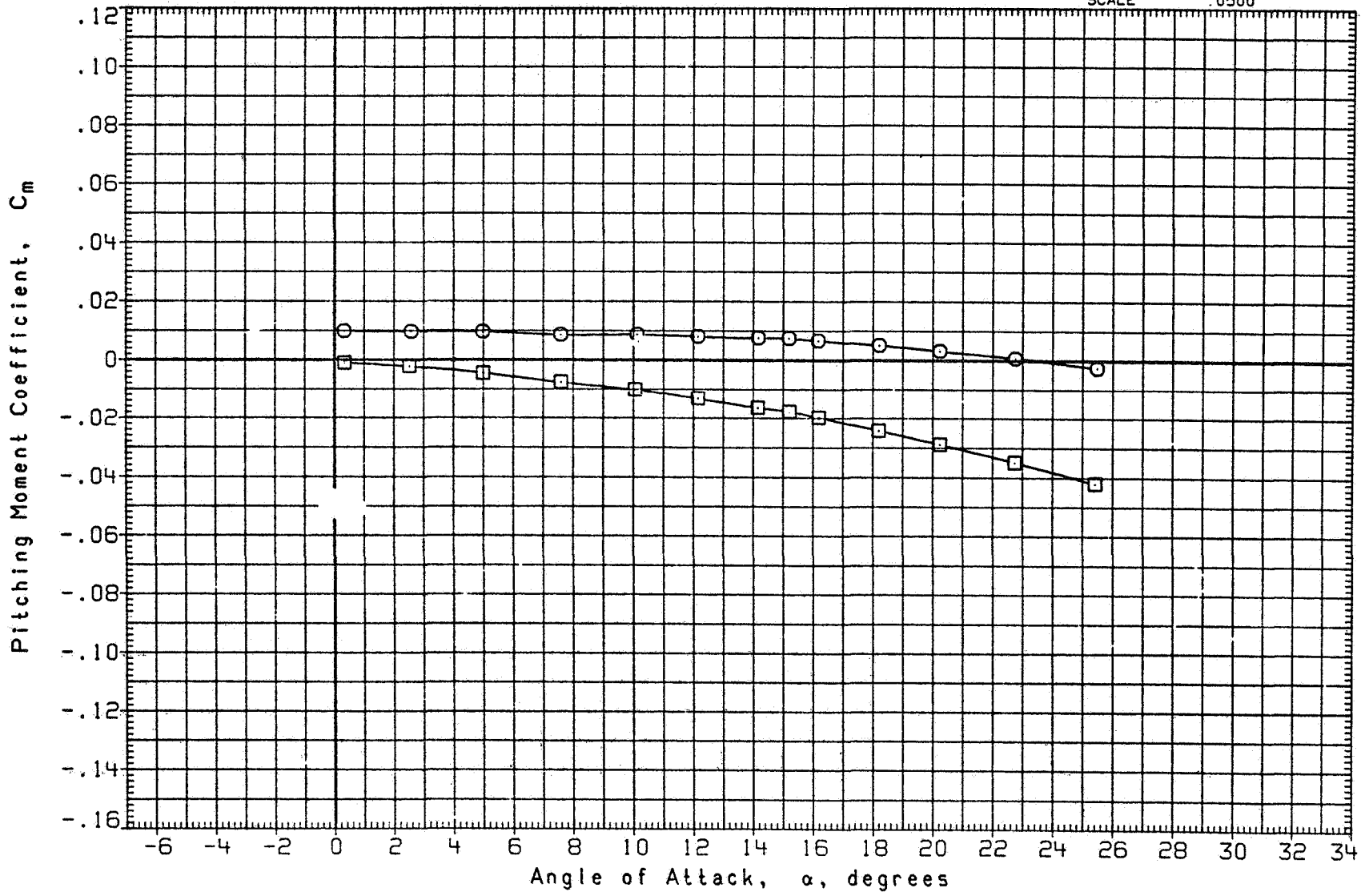


FIG.28 CONTROL SURF INTERACTIONS:ELEV=-10,BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H084	○	AMES 118-I-87 0A145C 01	.000	-10.000	55.000	-11.700
R2H085	□	AMES 118-I-87 0A145C 01	.000	-10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

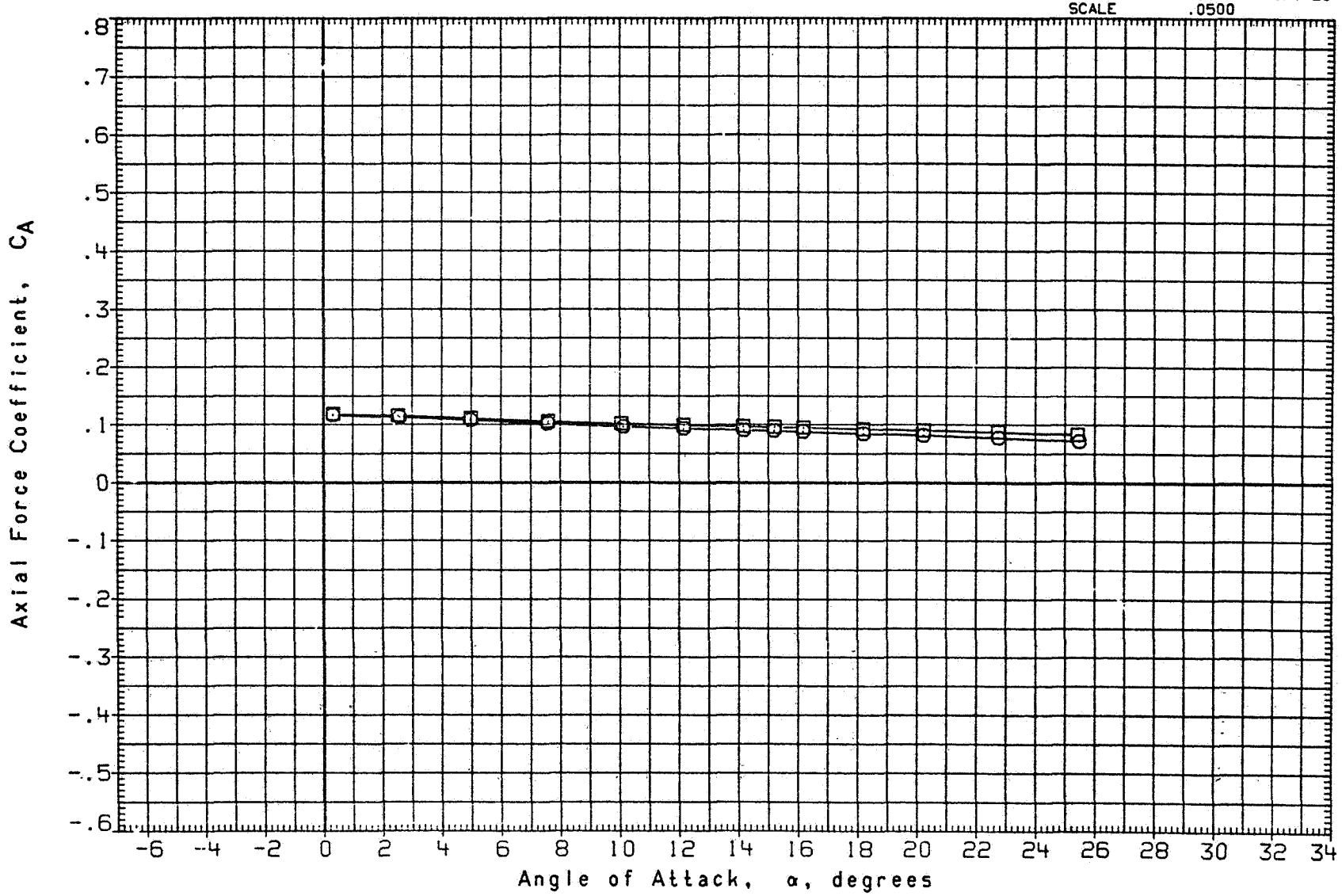


FIG.28 CONTROL SURF INTERACTIONS:ELEV=-10,BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H0B6	○	AMES 118-1-87 0A145C 01	.000	10.000	55.000	-11.700
R2H0B7	□	AMES 118-1-87 0A145C 01	.000	10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

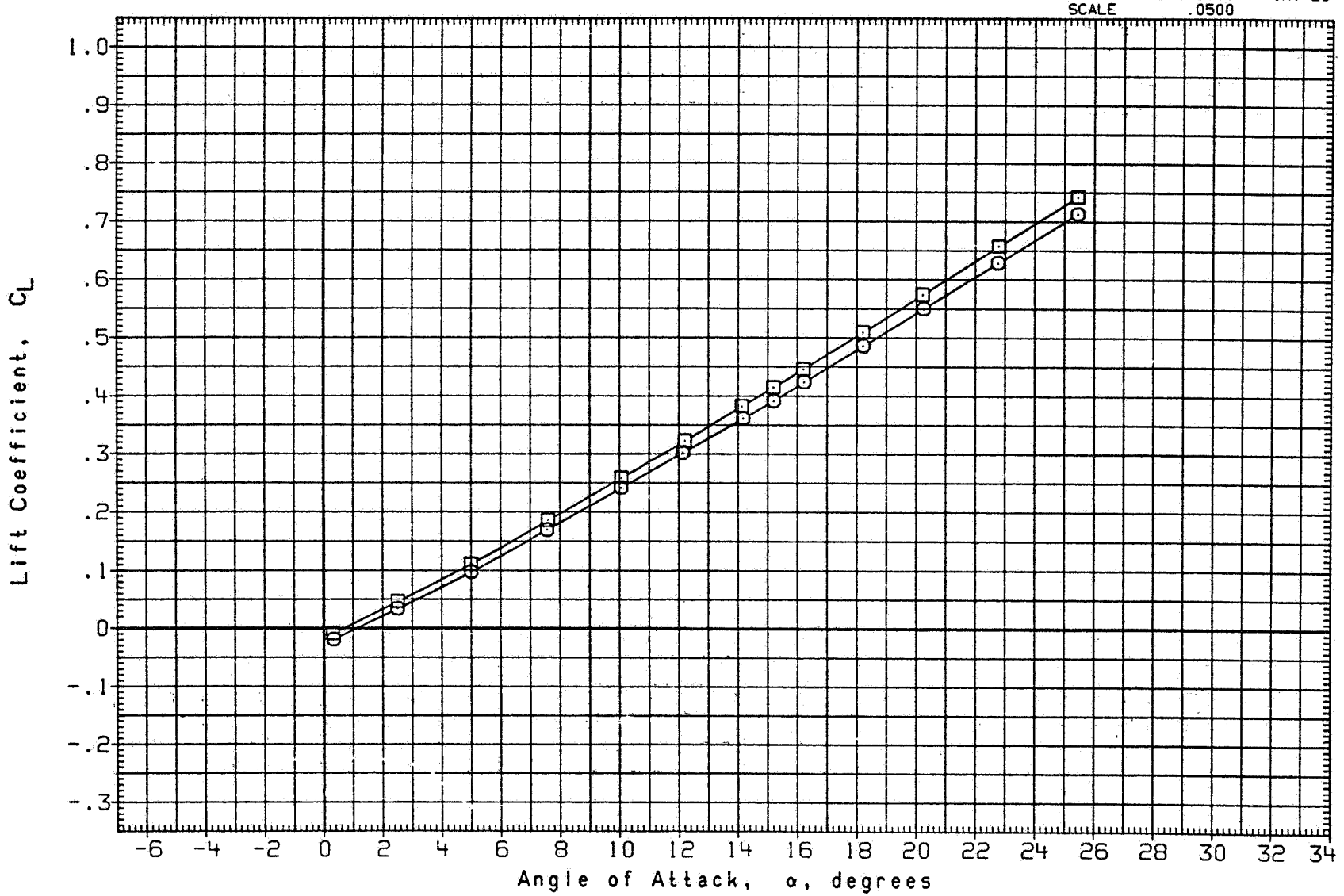


FIG.29 CONTROL SURF INTERACTIONS:ELEV=10, BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H0B6	○	AMES 118-1-87 0A145C 01	.000	10.000	55.000	-11.700
R2H0B7	□	AMES 118-1-87 0A145C 01	.000	10.000	55.000	16.300

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

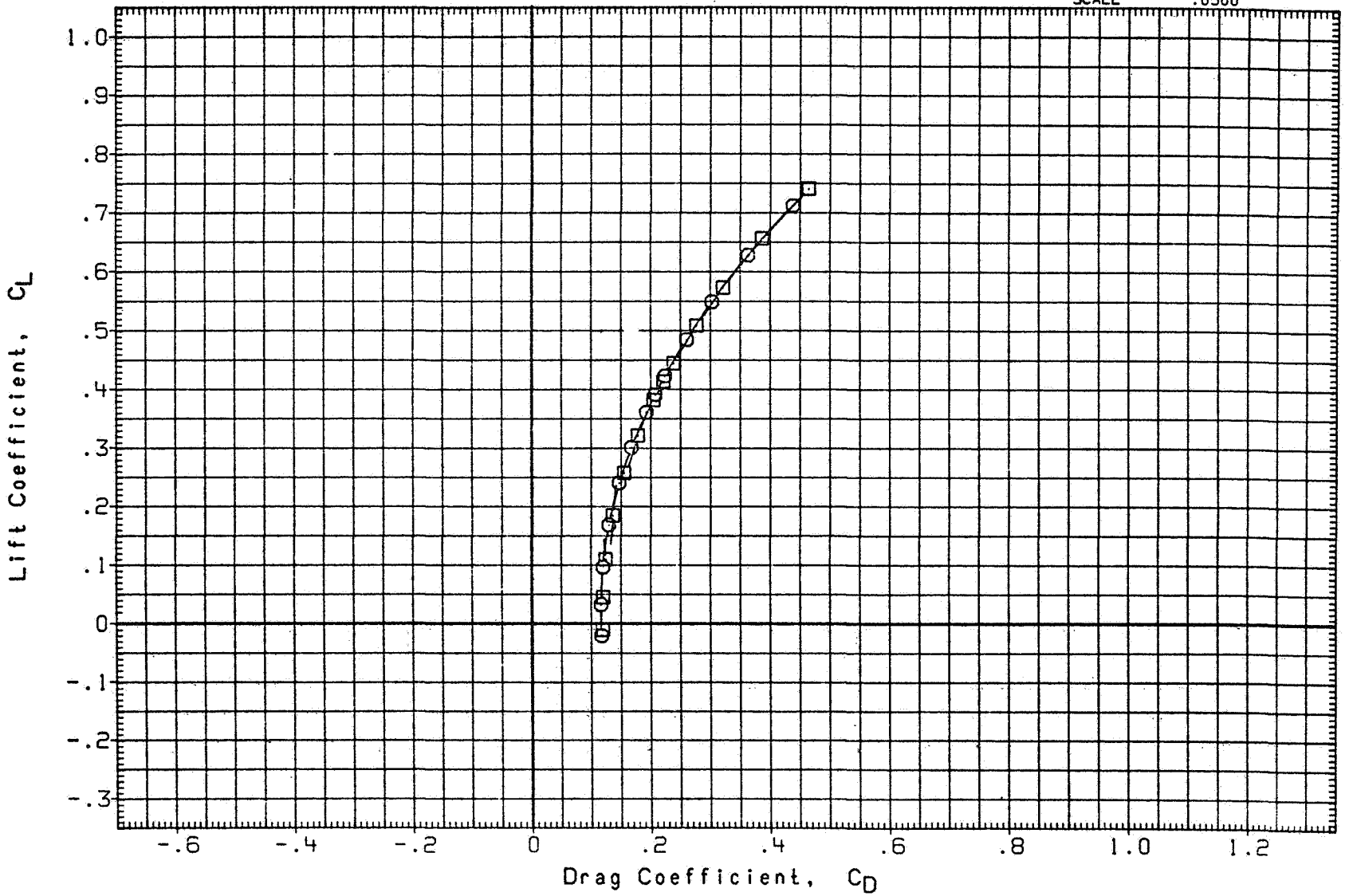


FIG.29 CONTROL SURF INTERACTIONS:ELEV=10, BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H0B6	○	AMES 118-1-87 0A145C 01	.000	10.000	55.000	-11.700
R2H0B7	□	AMES 118-1-87 0A145C 01	.000	10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

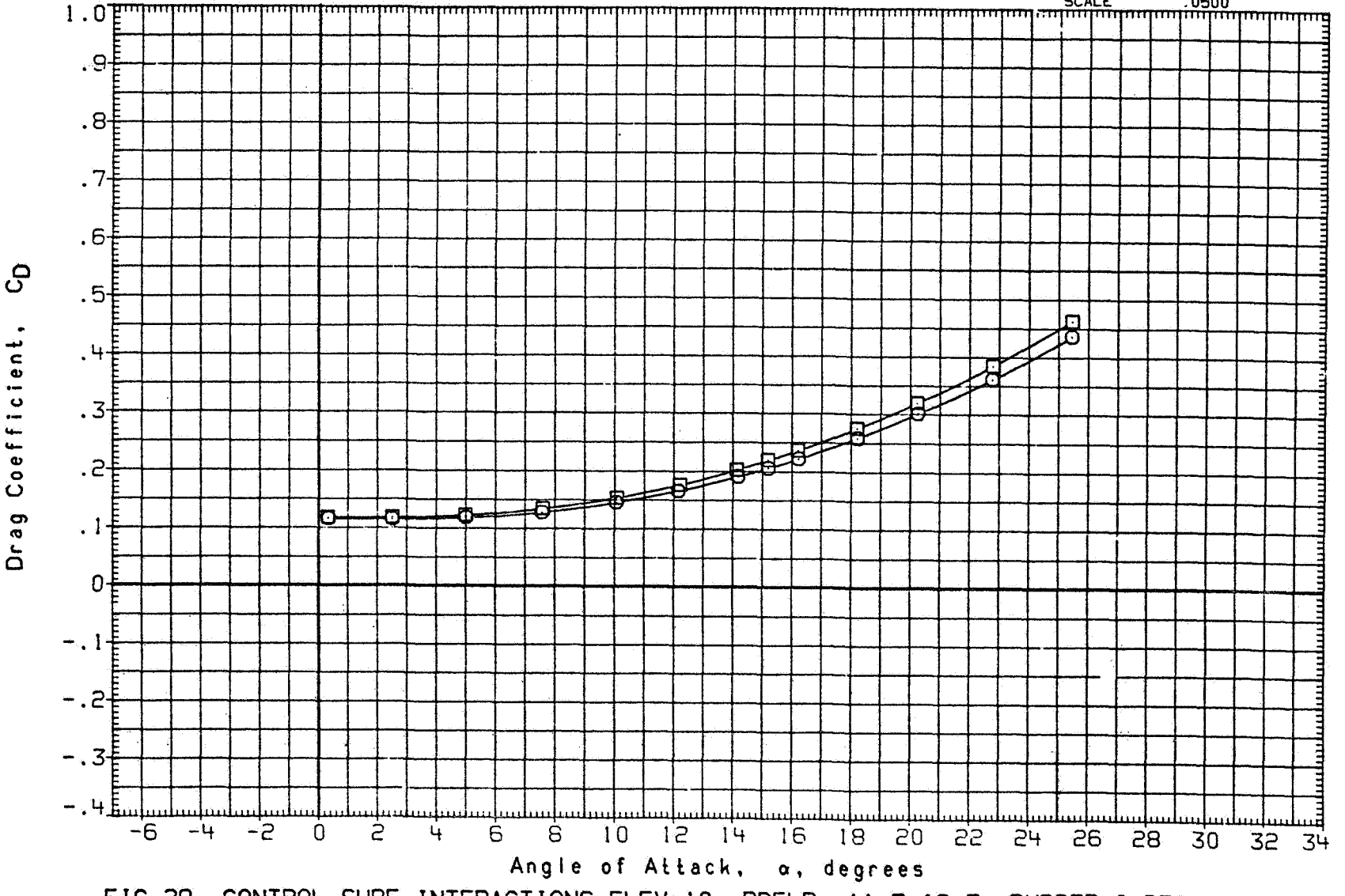


FIG.29 CONTROL SURF INTERACTIONS:ELEV=10, BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H086	○	AMES 118-1-87 0A145C 01	.000	10.000	55.000	-11.700
R2H087	□	AMES 118-1-87 0A145C 01	.000	10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

FIG.29 CONTROL SURF INTERACTIONS:ELEV=10, BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H086	○	AMES 118-1-87 0A145C 01	.000	10.000	55.000	-11.700
R2H087	□	AMES 118-1-87 0A145C 01	.000	10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

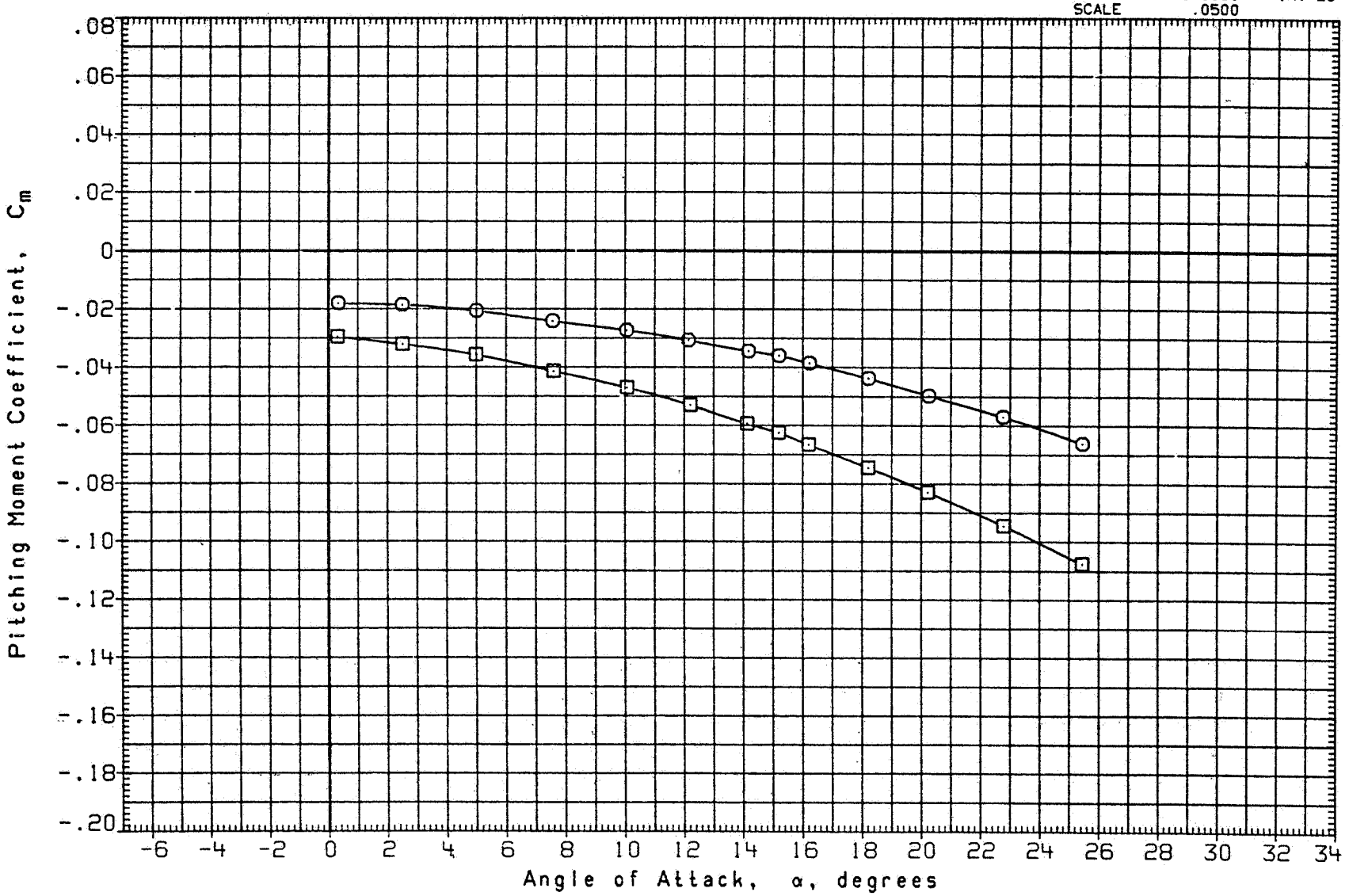


FIG.29 CONTROL SURF INTERACTIONS:ELEV=10, BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	SPDBRK	BDFLAP
R2H086	○	AMES 118-1-87 0A145C 01	.000	10.000	55.000	-11.700
R2H087	□	AMES 118-1-87 0A145C 01	.000	10.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

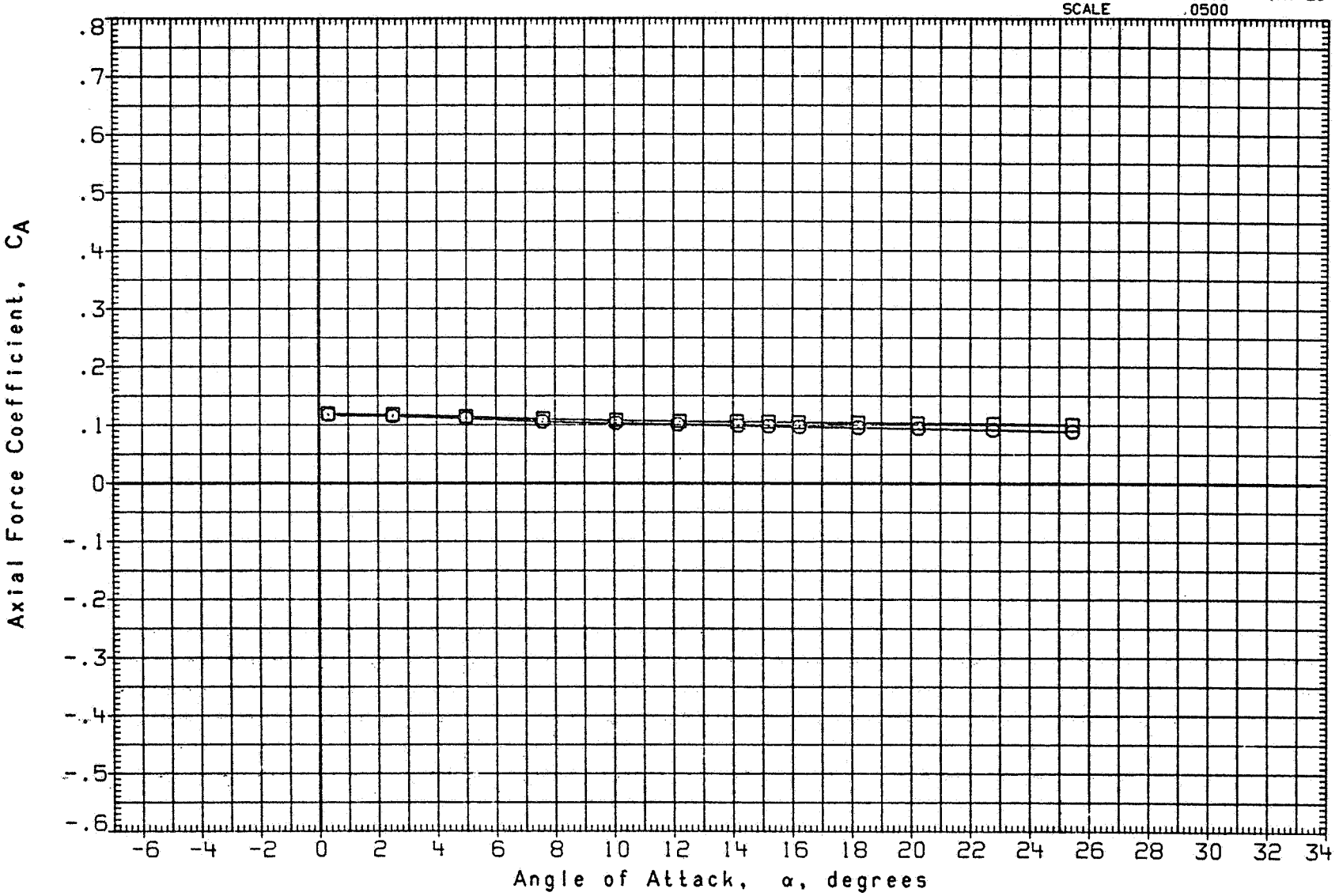


FIG.29 CONTROL SURF INTERACTIONS:ELEV=10, BDFLP=-11.7,16.3, RUDDER=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	ELEVON	SPDBRK
R2H0B2	○	AMES 118-1-87 0A145C 01	15.000	.000	10.000	55.000
R2H0B3	□	AMES 118-1-87 0A145C 01	15.000	.000	-10.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

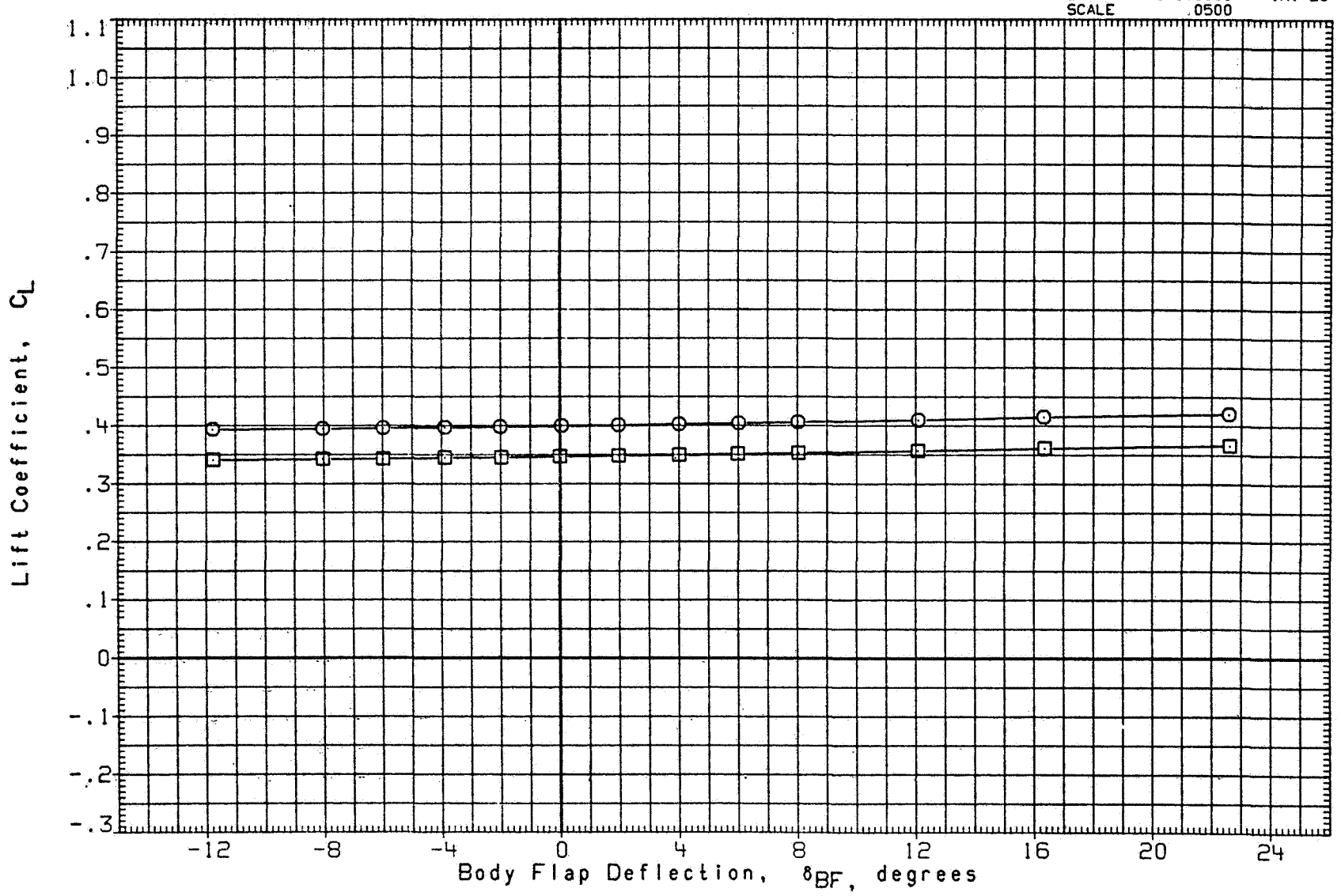


FIG.30 CONTROL SURF INTERACTIONS:BDFLP SWEEP, VARY ELEVON, ALPHA=15, BETA=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	ELEVON	SPDBRK
R2H0B2	○	AMES 118-1-87 0A145C 01	15.000	.000	10.000	55.000
R2H0B3	□	AMES 118-1-87 0A145C 01	15.000	.000	-10.000	55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

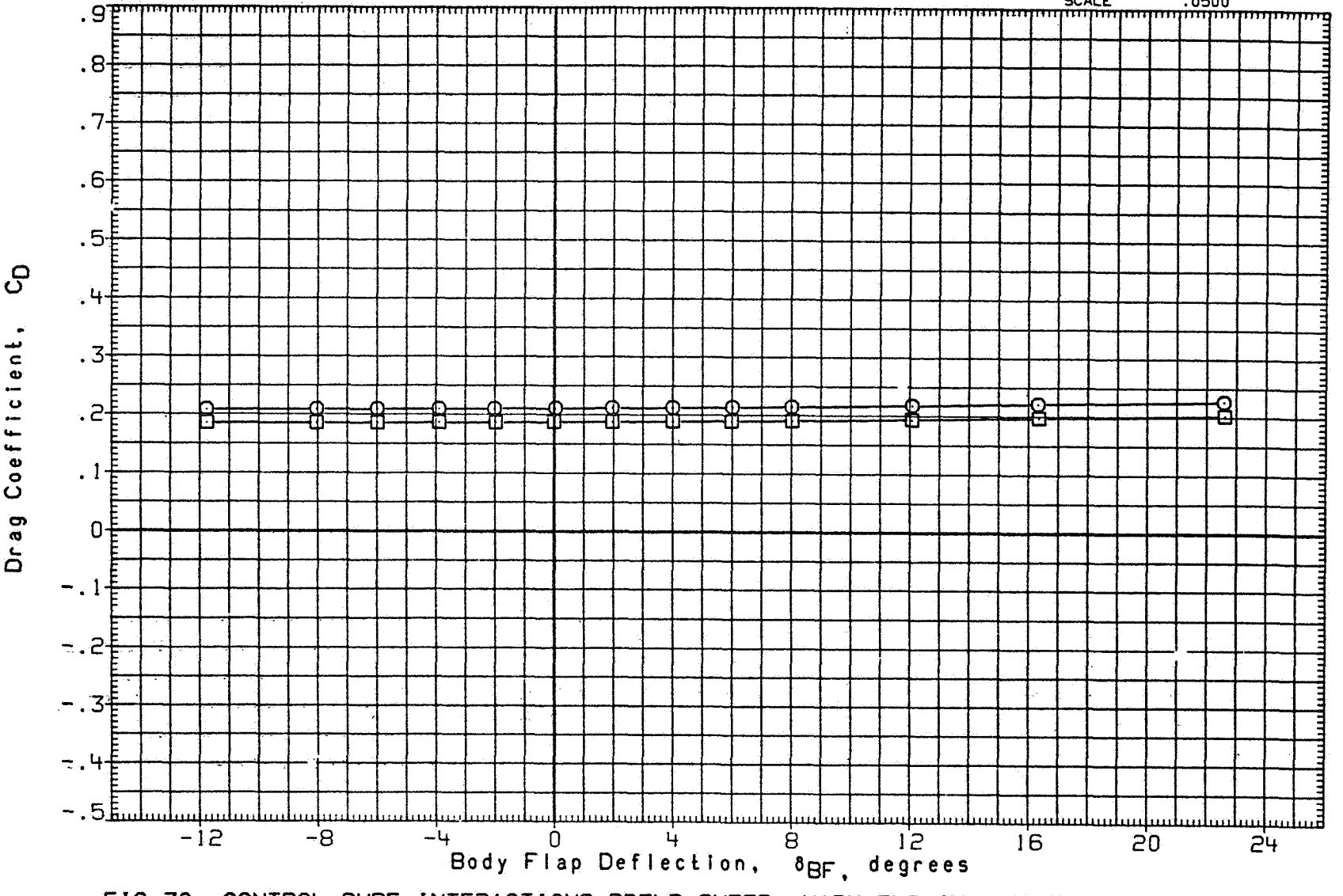


FIG.30 CONTROL SURF INTERACTIONS:BDFLP SWEEP, VARY ELEVON, ALPHA=15, BETA=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	ELEVON	SPDBRK
R2H082	○	AMES 118-1-87 OA145C 01	15.000	.000	10.000	55.000
R2H083	□	AMES 118-1-87 OA145C 01	15.000	.000	-10.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

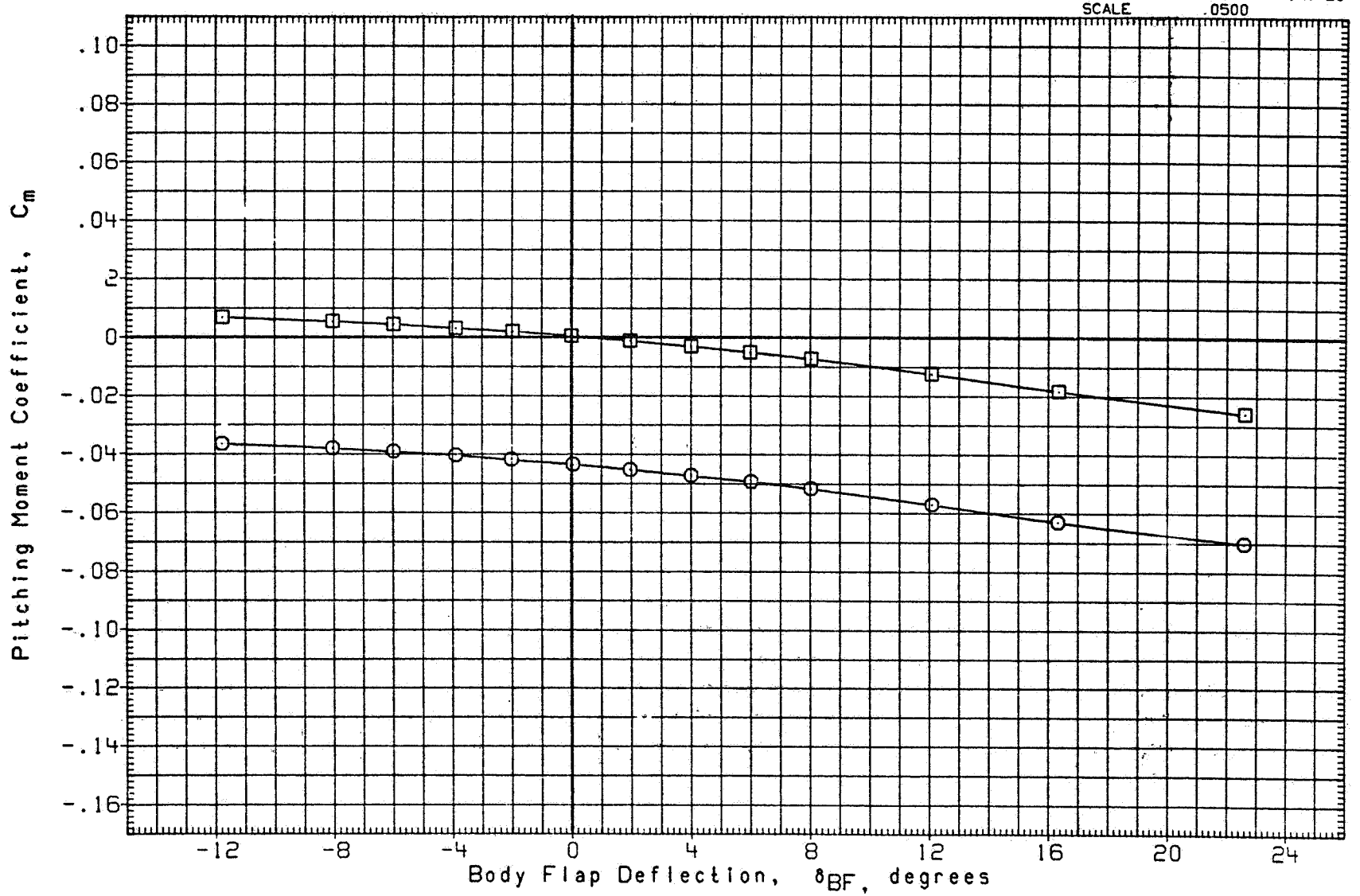


FIG.30 CONTROL SURF INTERACTIONS:BDFLP SWEEP, VARY ELEVON, ALPHA=15, BETA=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	SPDBRK	BDFLAP
R2H0A6	○	AMES 118-1-87 0A145C 01	15.000	.000	55.000	-11.700
R2H049	□	AMES 118-1-87 0A145C 01	15.000	.000	55.000	.000
R2H0A7	◇	AMES 118-1-87 0A145C 01	15.000	.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

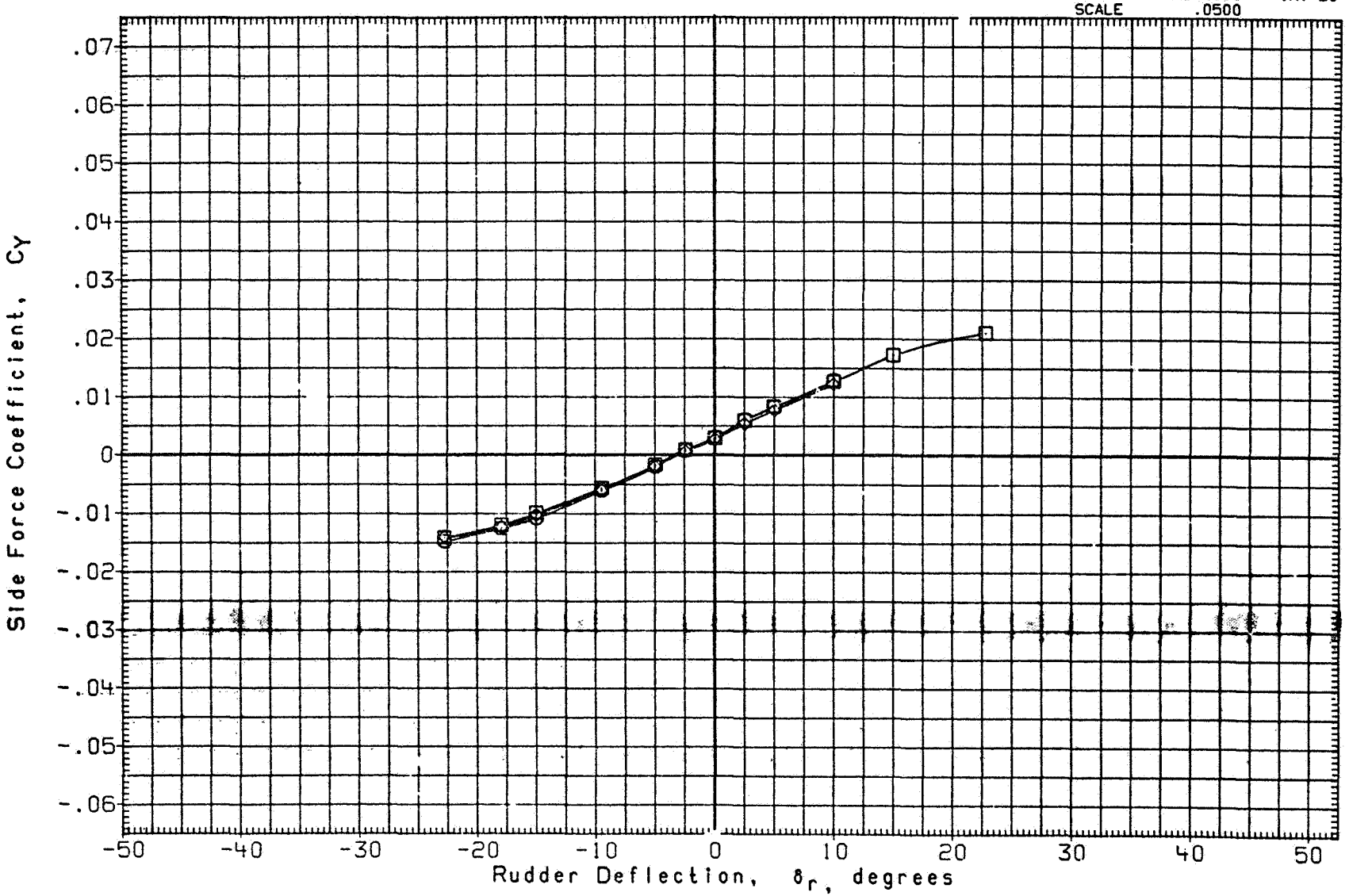


FIG.31 CONTROL SURF INTERACTIONS:RUDDER SWEEP,VARY BDFLP,ALPHA=15,BETA=ELV=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	SPDBRK	BDFLAP
R2H0A6	○	AMES 118-1-87 0A145C 01	15.000	.000	55.000	-11.700
R2H049	□	AMES 118-1-87 0A145C 01	15.000	.000	55.000	.000
R2H0A7	◇	AMES 118-1-87 0A145C 01	15.000	.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

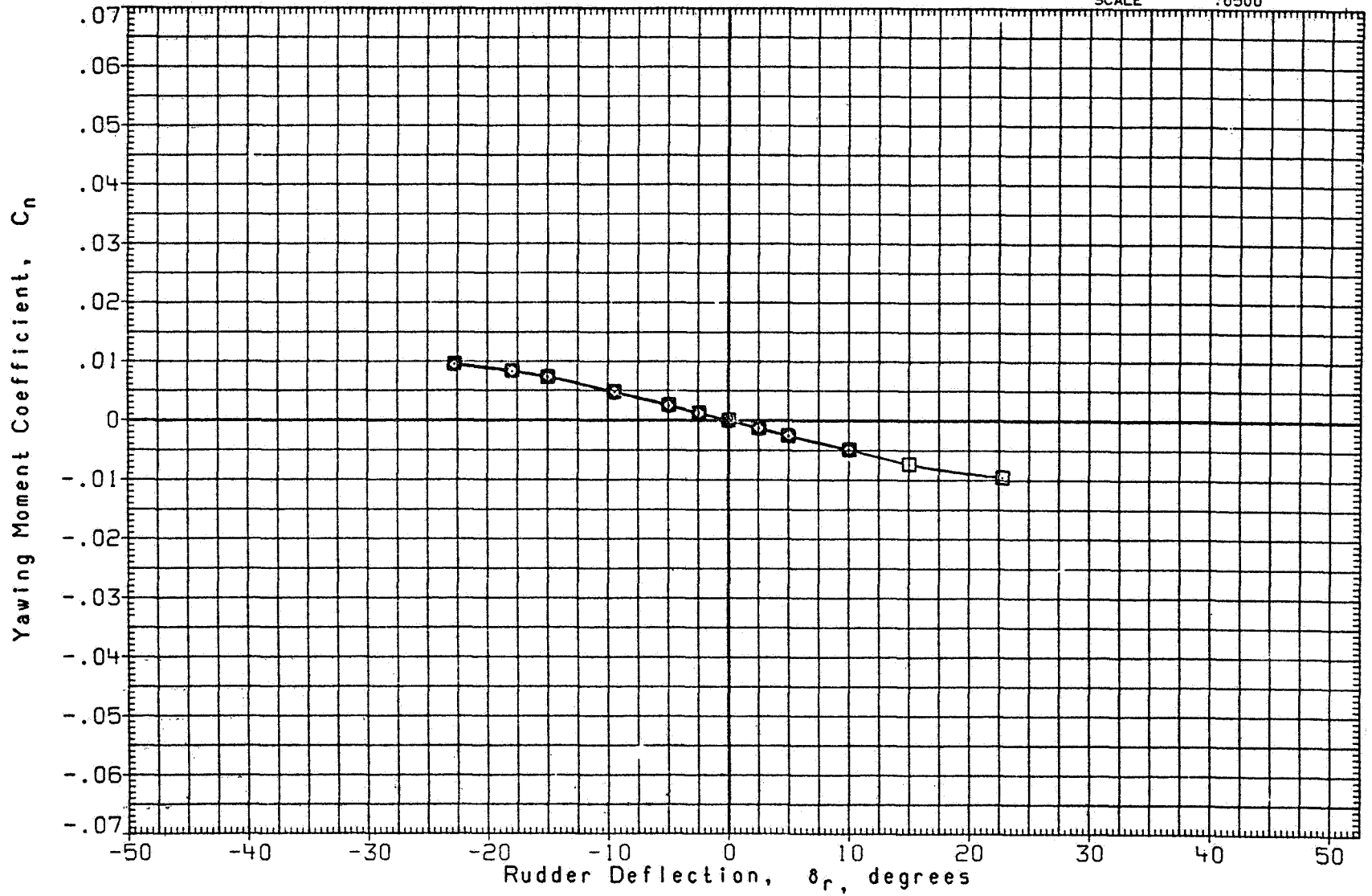


FIG.31 CONTROL SURF INTERACTIONS:RUDDER SWEEP,VARY BDFLP,ALPHA=15,BETA=ELV=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	SPDBRK	BDFLAP
R2H0A6	○	AMES 118-1-87 0A145C 01	15.000	.000	55.000	-11.700
R2H049	□	AMES 118-1-87 0A145C 01	15.000	.000	55.000	.000
R2H0A7	◇	AMES 118-1-87 0A145C 01	15.000	.000	55.000	16.300

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

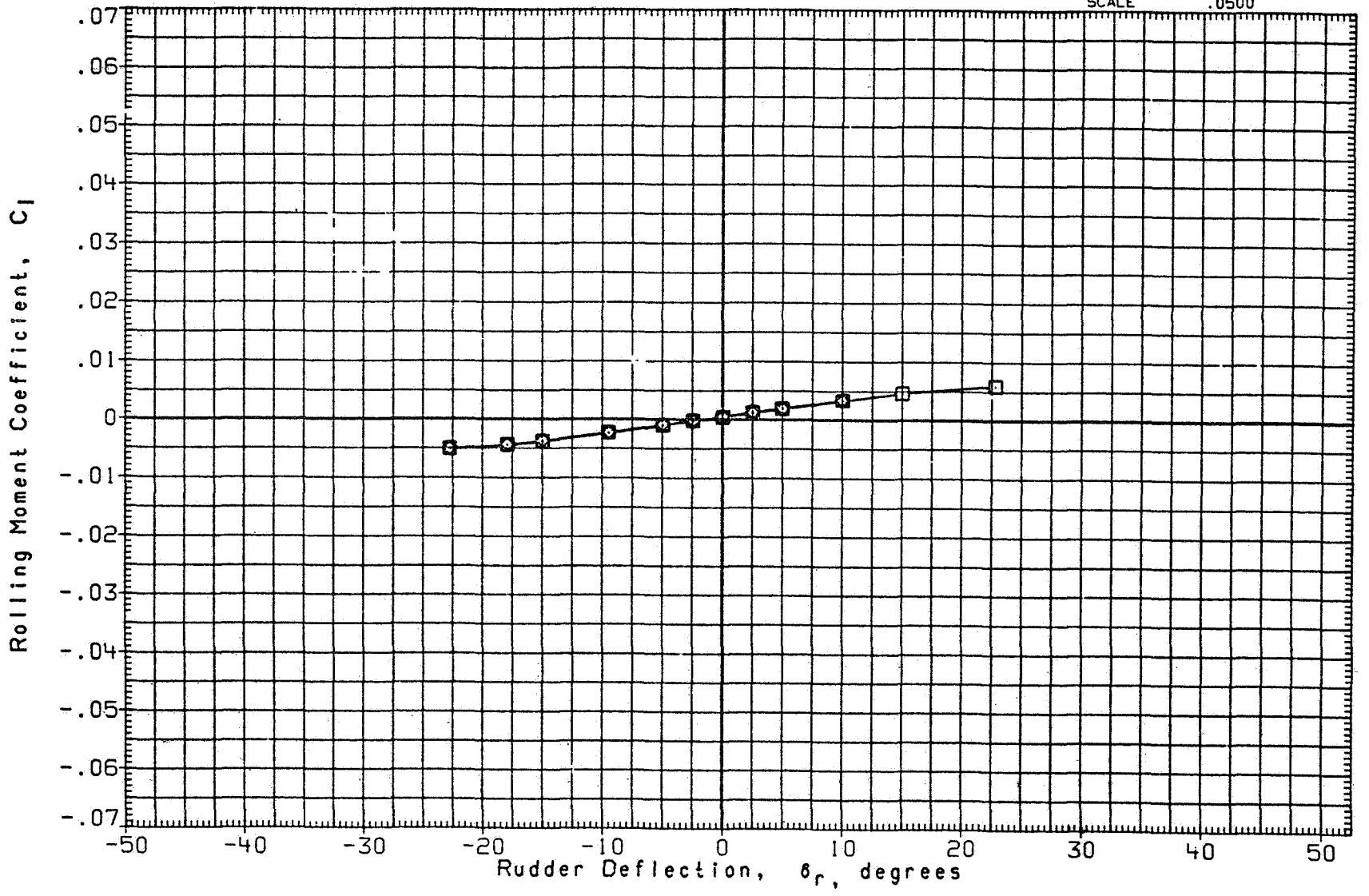


FIG.31 CONTROL SURF INTERACTIONS:RUDDER SWEEP,VARY BDFLP,ALPHA=15,BETA=ELV=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BDFLAP	SPDBRK	RUDDER
R2H0A8	○	AMES 118-1-87 0A145C 01	15.000	-11.700	55.000	-5.000
R2H0A9	□	AMES 118-1-87 0A145C 01	15.000	16.300	55.000	-5.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

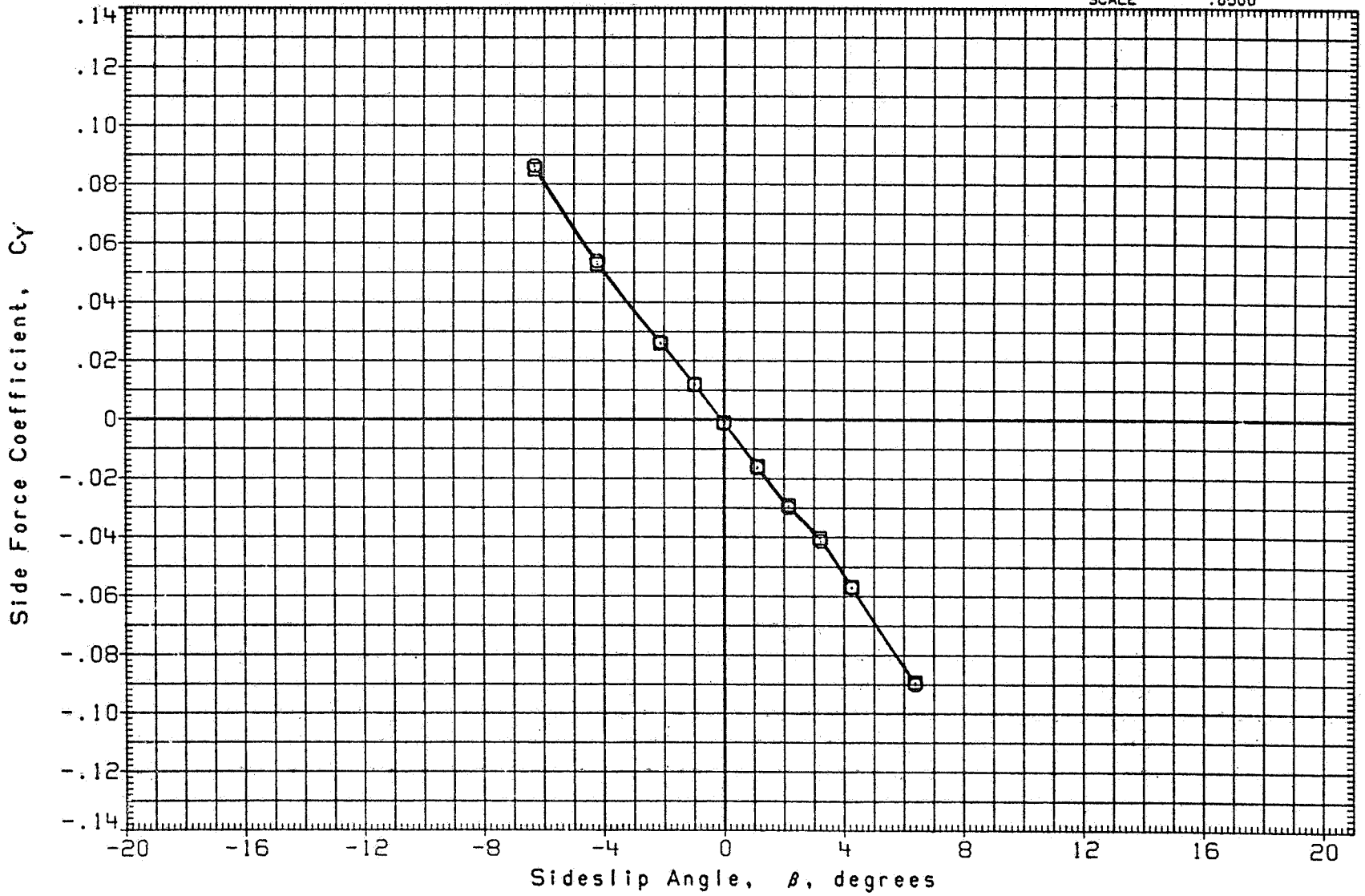


FIG.32 CONTROL SURF INTERACTIONS:SIDESLIP SWEEP,VARY BDFLP,RUD=-5,ALPHA=15

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BDFLAP	SPDBRK	RUDDER
R2H0A8	○	AMES 118-1-87 0A145C 01	15.000	-11.700	55.000	-5.000
R2H0A9	□	AMES 118-1-87 0A145C 01	15.000	16.300	55.000	-5.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

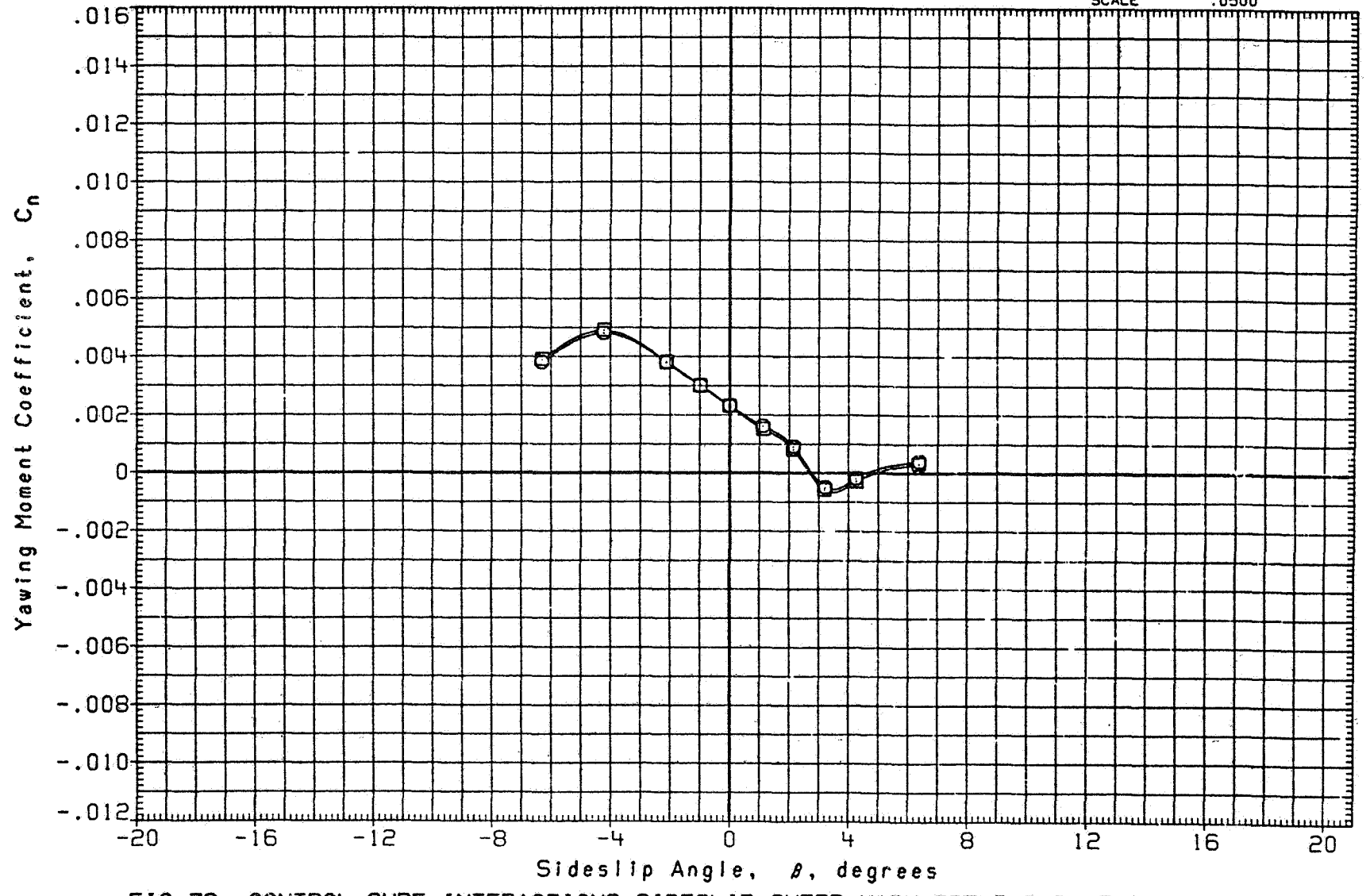


FIG.32 CONTROL SURF INTERACTIONS:SIDESLIP SWEEP,VARY BDFLP,RUD=-5,ALPHA=15

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BDFLAP	SPDBRK	RUDDER
R2H0A8	○	AMES 118-1-87 0A145C 01	15.000	-11.700	55.000	-5.000
R2H0A9	□	AMES 118-1-87 0A145C 01	15.000	16.300	55.000	-5.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	NCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

FIG.32 CONTROL SURF INTERACTIONS:SIDESLIP SWEEP,VARY BDFLP,RUD=-5,ALPHA=15

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	ELEVON	SPDBRK
R2H075	○	AMES 118-1-87 OA145C 01	15.000	.000	.000	25.000
R2H060	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	55.000
R2H0A5	◇	AMES 118-1-87 OA145C 01	15.000	.000	.000	87.200

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

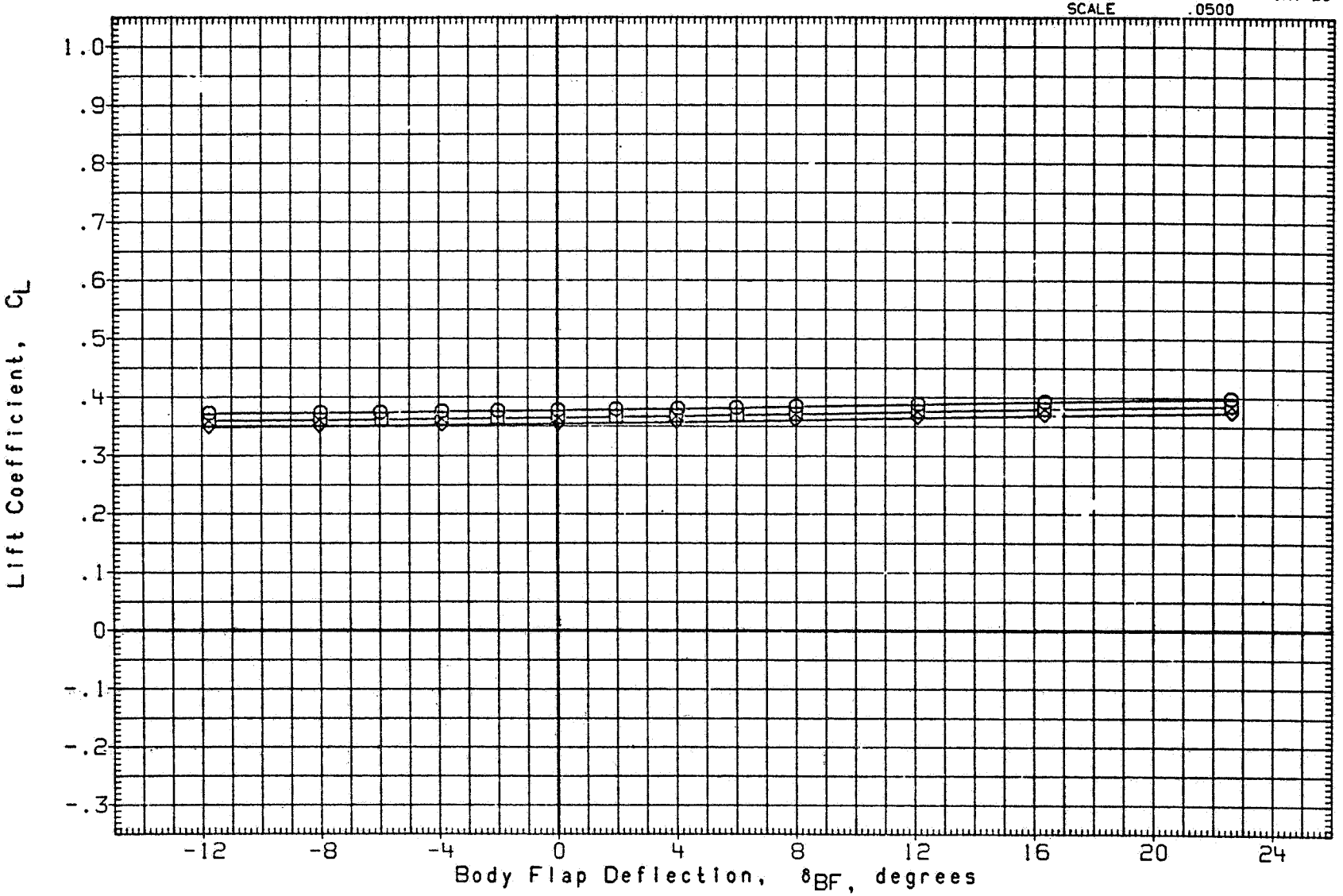


FIG.33 CONTROL SURF INTERACTIONS:BDFLP SWEEP,VARY SPDBRK,ALPHA=15,BETA=0,ELV=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
R2H075	○	AMES 118-1-87 0A145C 01
R2H060	□	AMES 118-1-87 0A145C 01
R2H0A5	◇	AMES 118-1-87 0A145C 01

ALPHA	BETA	ELEVON	SPDBRK
15.000	.000	.000	25.000
15.000	.000	.000	55.000
15.000	.000	.000	87.200

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

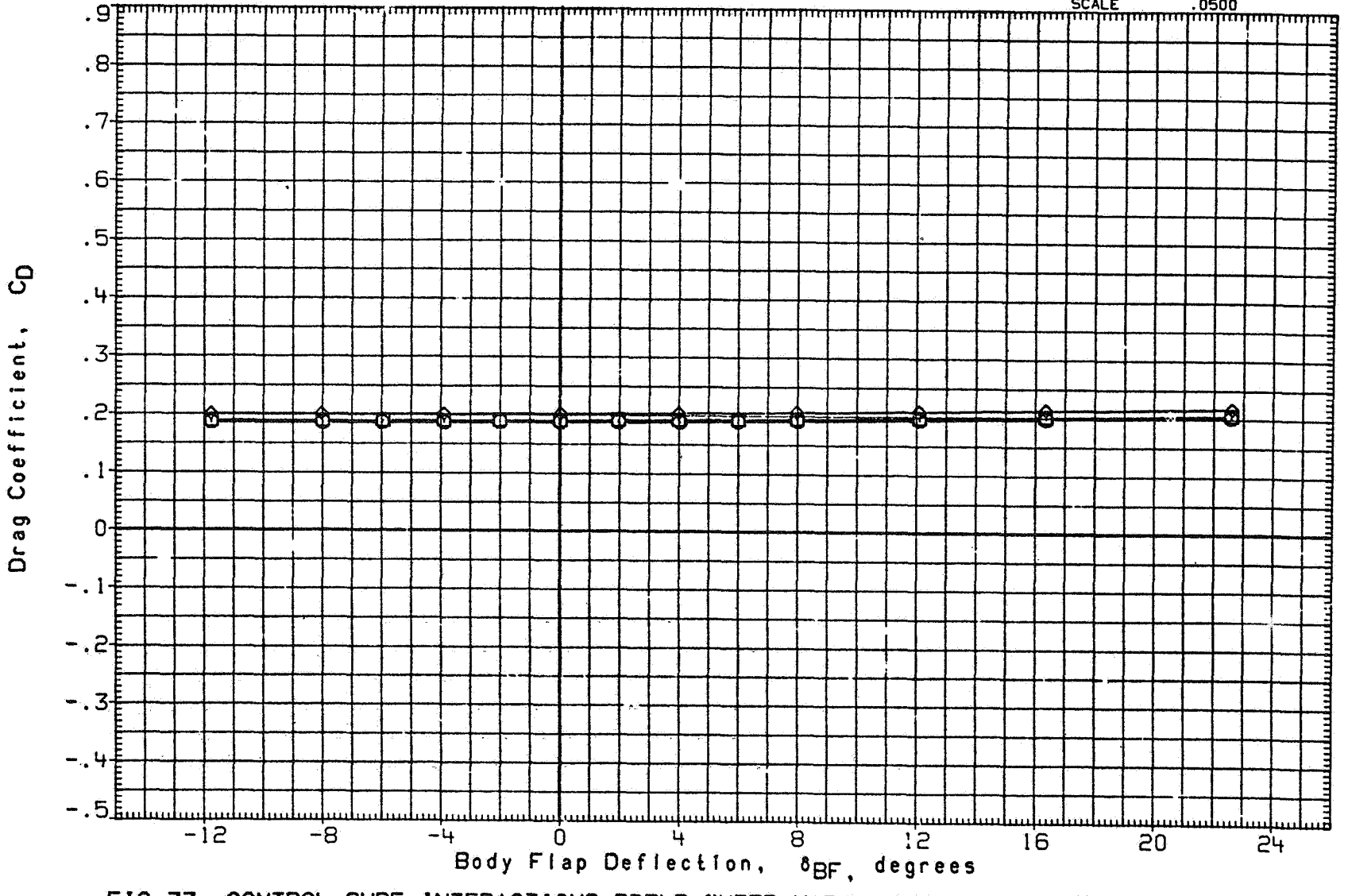


FIG.33 CONTROL SURF INTERACTIONS:BDFLP SWEEP,VARY SPDBRK,ALPHA=15,BETA=0,ELV=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	ELEVON	SPDBRK
R2H075	○	AMES 118-1-87 0A145C 01	15.000	.000	.000	25.000
R2H060	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	55.000
R2H0A5	◇	AMES 118-1-87 0A145C 01	15.000	.000	.000	87.200

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

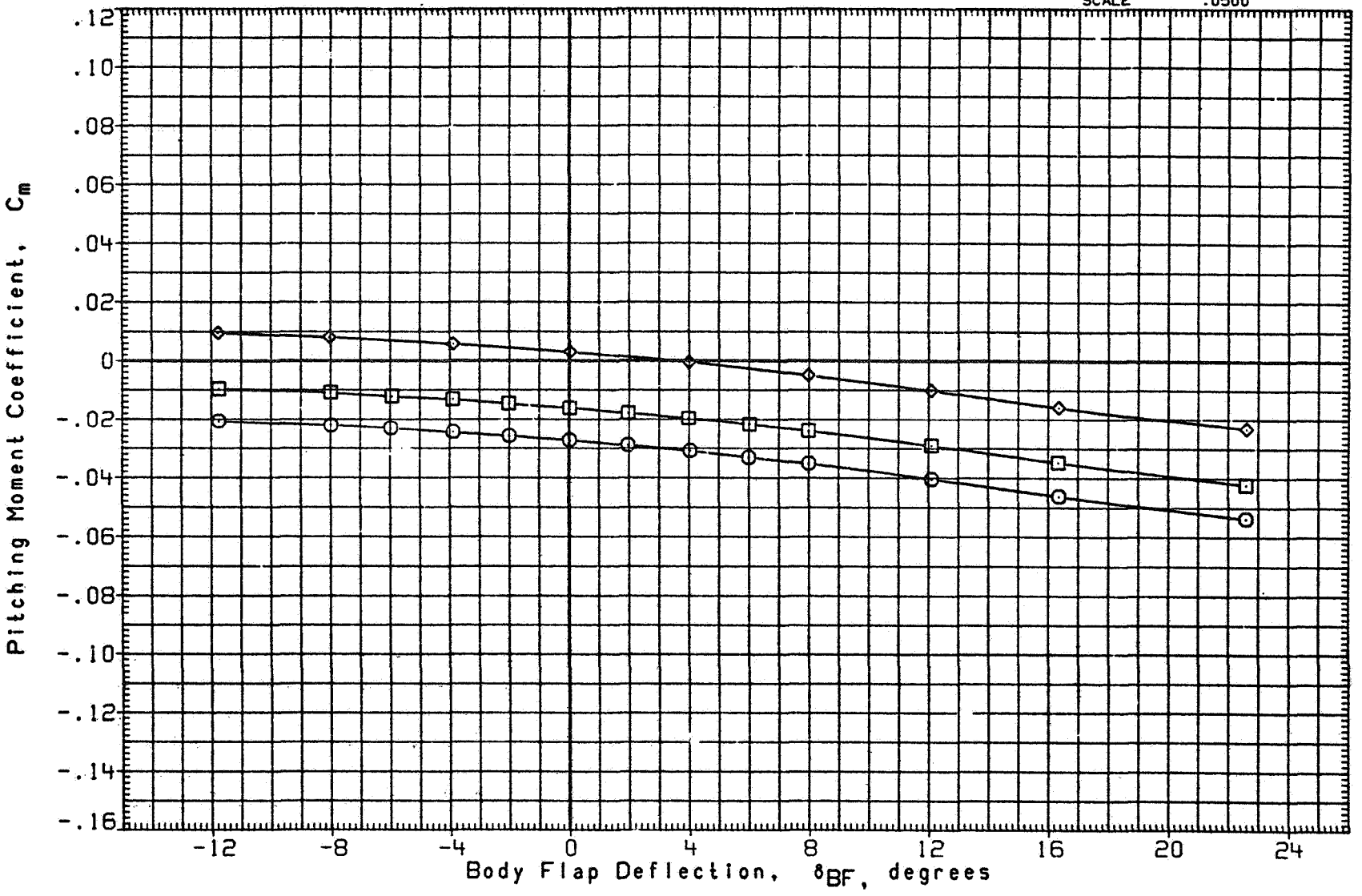


FIG.33 CONTROL SURF INTERACTIONS:BDFLP SWEEP,VARY SPDBRK,ALPHA=15,BETA=0,ELV=0

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	ELEVON	SPDBRK
R2H075	○	DATA NOT AVAILABLE	15.000	.000	.000	25.000
R2H060	□	AMES 118-1-87 0A145C 01	15.000	.000	.000	55.000
R2H0A5	◇	DATA NOT AVAILABLE	15.000	.000	.000	87.200

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

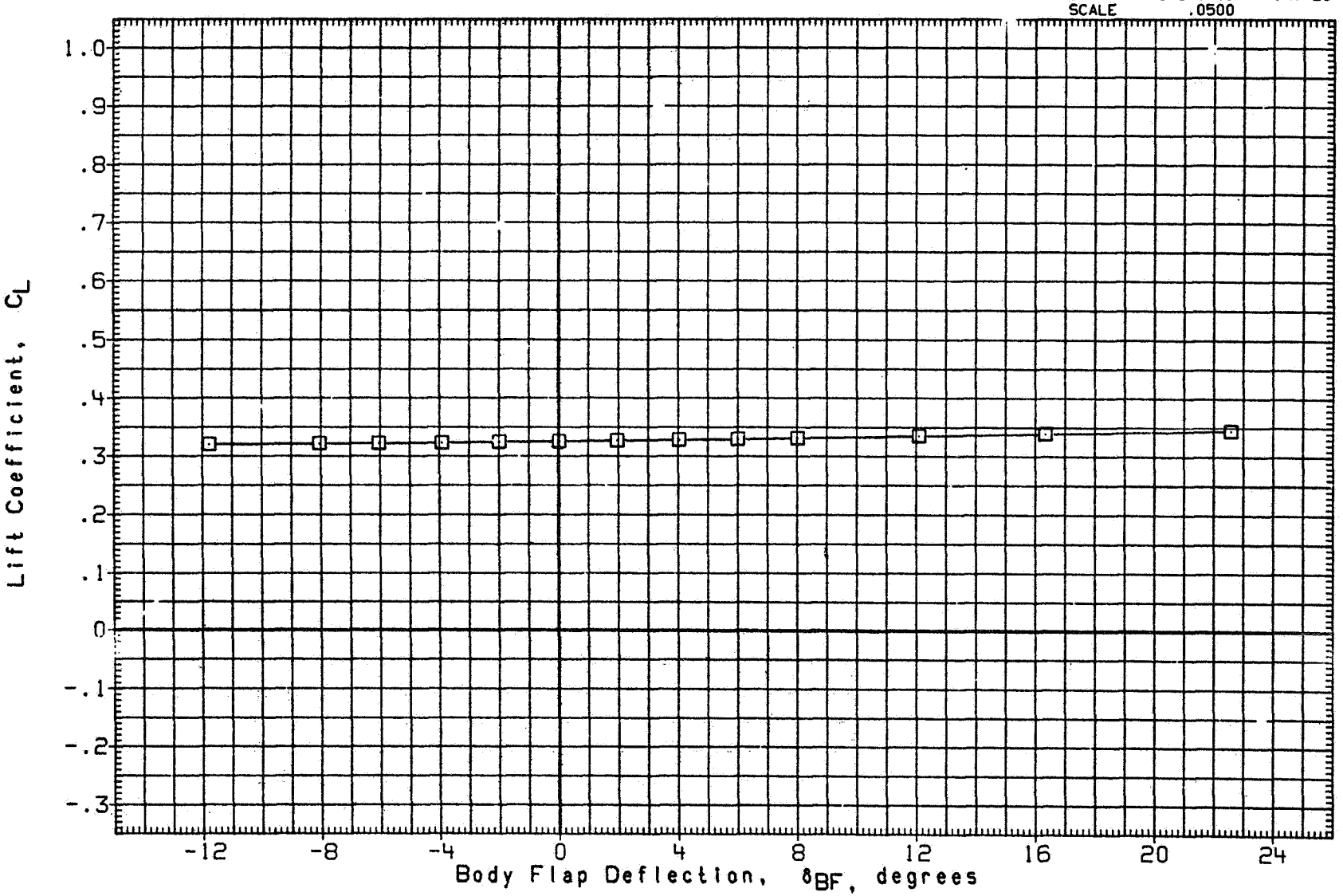


FIG.33 CONTROL SURF INTERACTIONS:BDFLP SWEEP,VARY SPDBRK,ALPHA=15,BETA=0,ELV=0

(B)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION
R2H075	○	DATA NOT AVAILABLE
R2H060	□	AMES 118-1 87 0A145C 01
R2H0A5	◇	DATA NOT AVAILABLE

ALPHA	BETA	ELEVON	SPDBRK
15.000	.000	.000	25.000
15.000	.000	.000	55.000
15.000	.000	.000	87.200

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

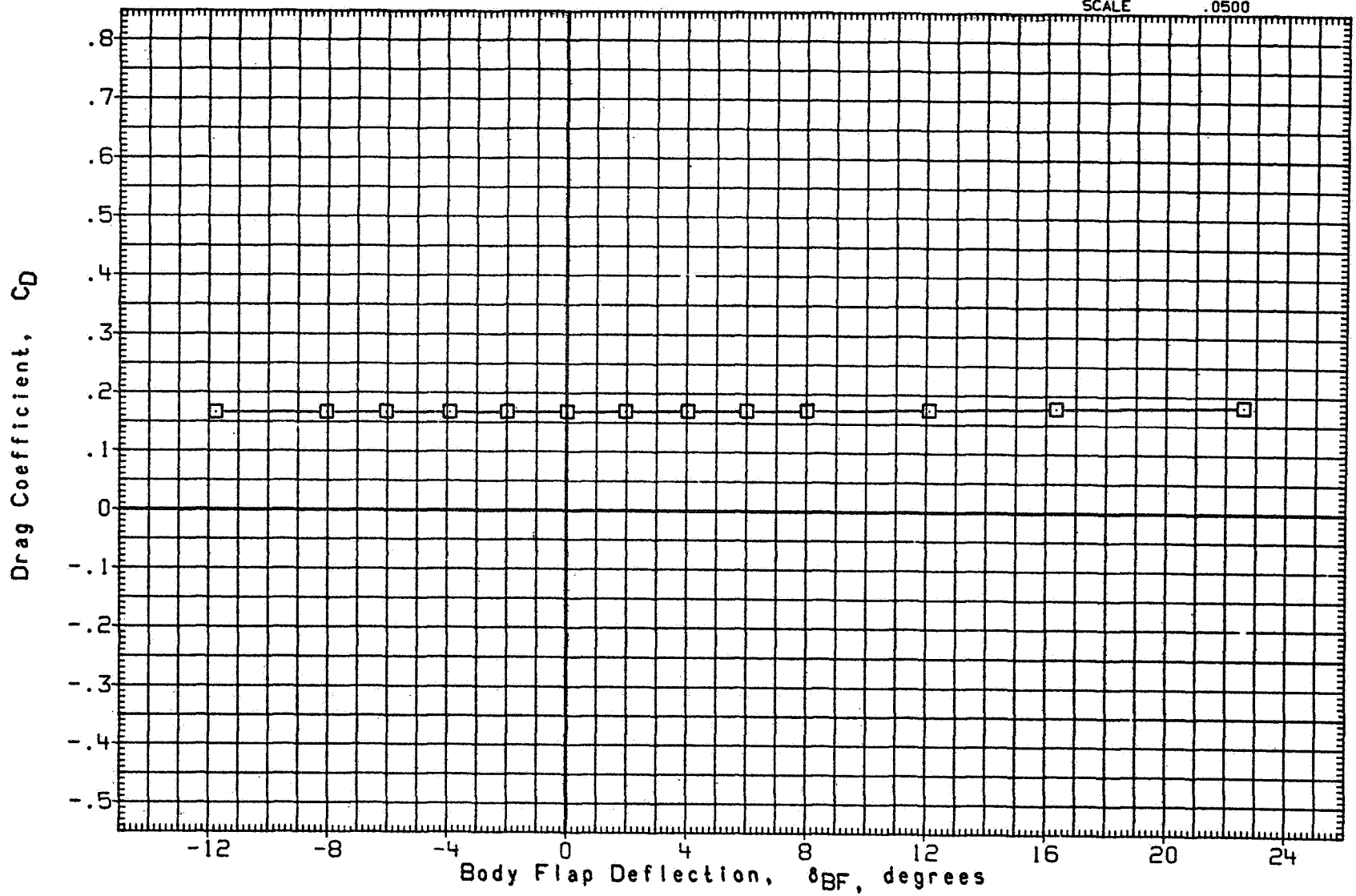


FIG.33 CONTROL SURF INTERACTIONS:BDFLP SWEEP,VARY SPDBRK,ALPHA=15,BETA=0,ELV=0

(B)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	ELEVON	SPDBRK
R2H075	○	DATA NOT AVAILABLE	15.000	.000	.000	25.000
R2H060	□	AMES 118-1-87 OA145C 01	15.000	.000	.000	55.000
R2H0A5	◇	DATA NOT AVAILABLE	15.000	.000	.000	87.200

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

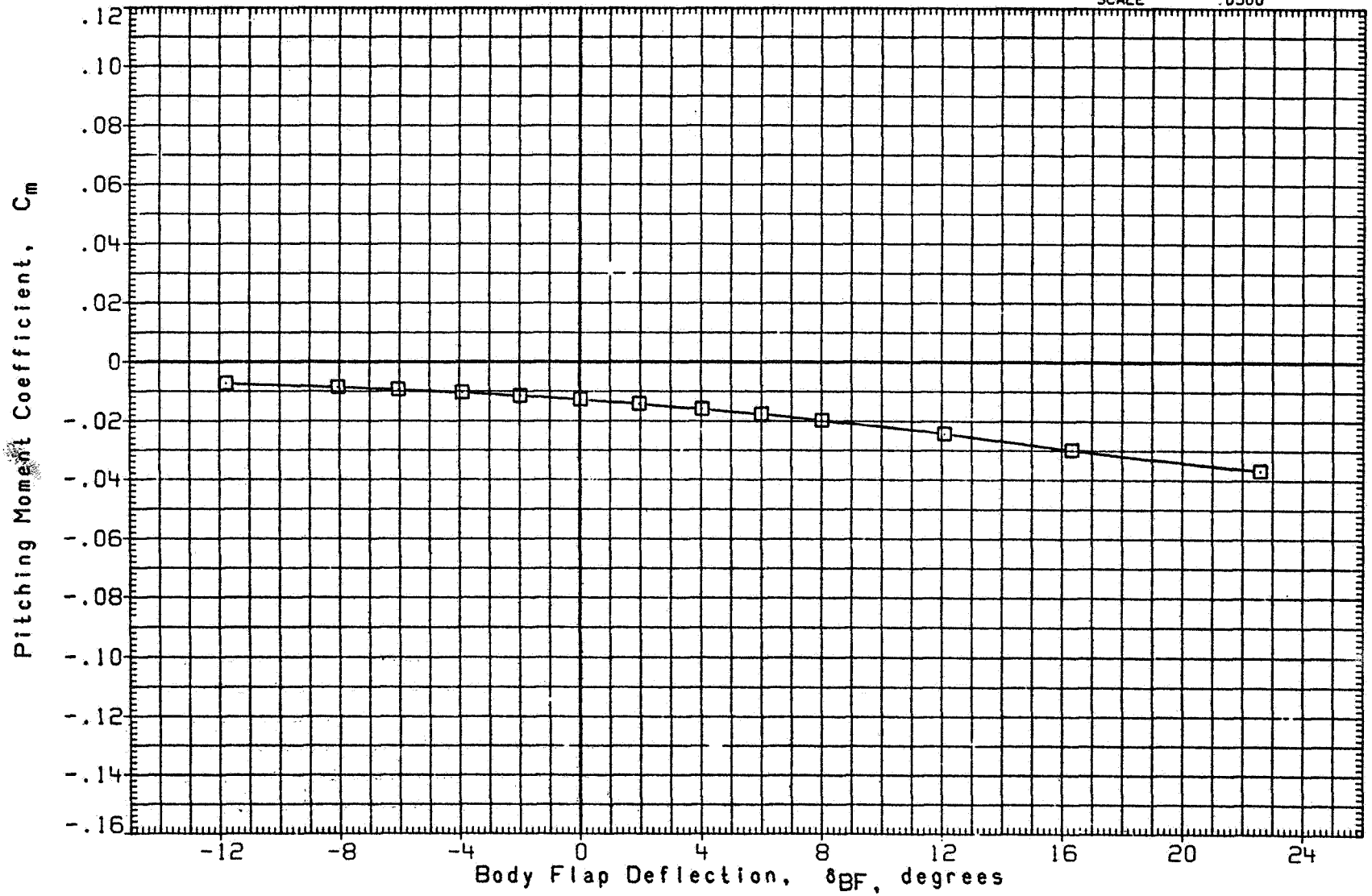


FIG.33 CONTROL SURF INTERACTIONS:BDFLP SWEEP,VARY SPDBRK,ALPHA=15,BETA=0,ELV=0

(B)MACH = 3.50

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H025	○	AMES 118-1-87 OA145C 01	-10.000	55.000	.000	10.000
R2H006	□	AMES 118-1-87 OA145C 01	.000	55.000	.000	10.000
R2H022	◇	AMES 118-1-87 OA145C 01	10.000	55.000	.000	10.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

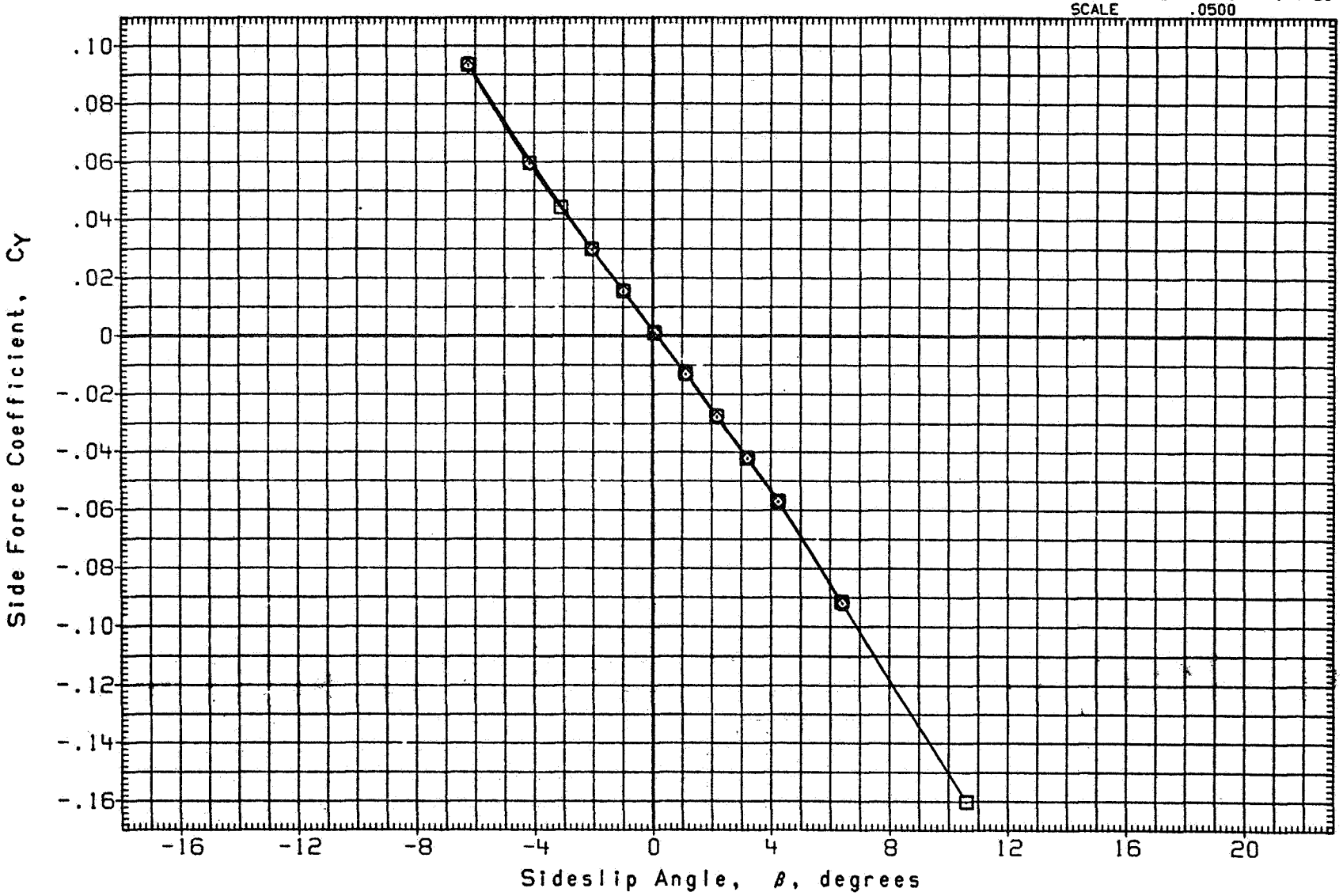


FIG.34 ELEVON IN SIDESLIP SWEEP: ALPHA=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H025	○	AMES 118-1-87 0A145C 01	-10.000	55.000	.000	10.000
R2H006	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	10.000
R2H022	◇	AMES 118-1-87 0A145C 01	10.000	55.000	.000	10.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

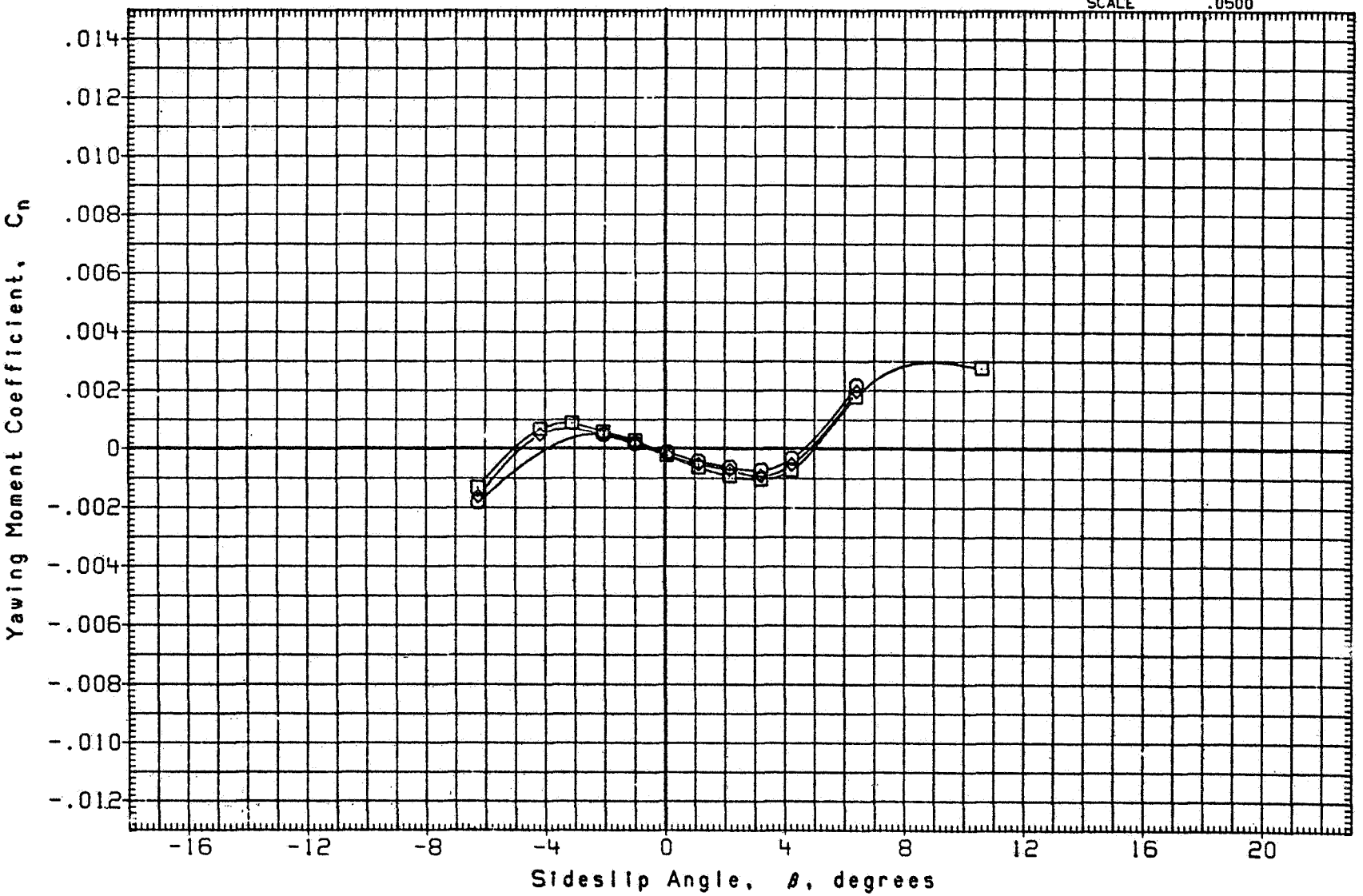


FIG.34 ELEVON IN SIDESLIP SWEEP: ALPHA=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H025	○	AMES 118-1-87 OA145C 01	-10.000	55.000	.000	10.000
R2H006	□	AMES 118-1-87 OA145C 01	.000	55.000	.000	10.000
R2H022	◇	AMES 118-1-87 OA145C 01	10.000	55.000	.000	10.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

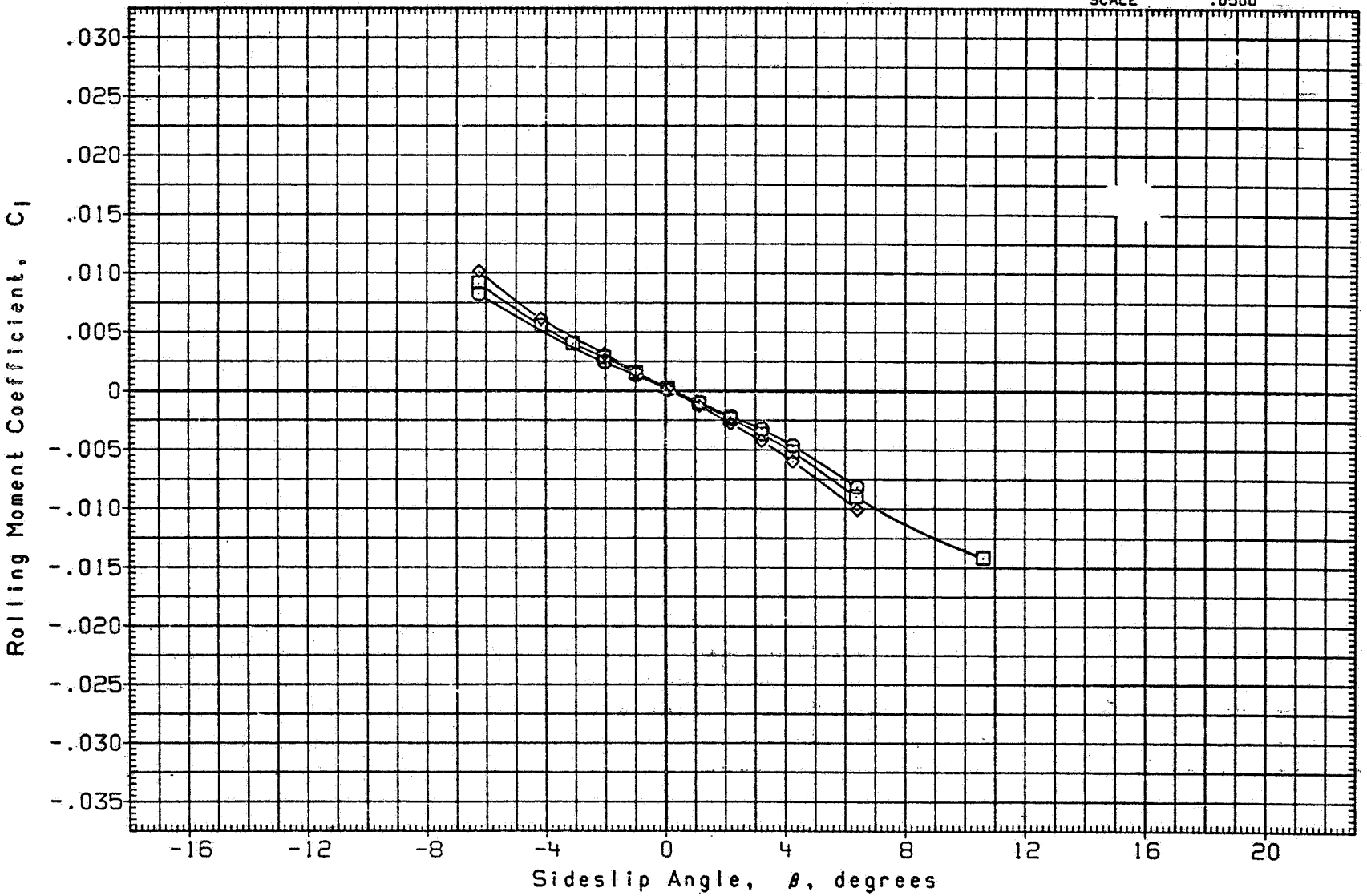


FIG.34 ELEVON IN SIDESLIP SWEEP: ALPHA=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
G2H006	O	AMES I18-1-87 OA145C 01	.000	55.000	.000	10.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

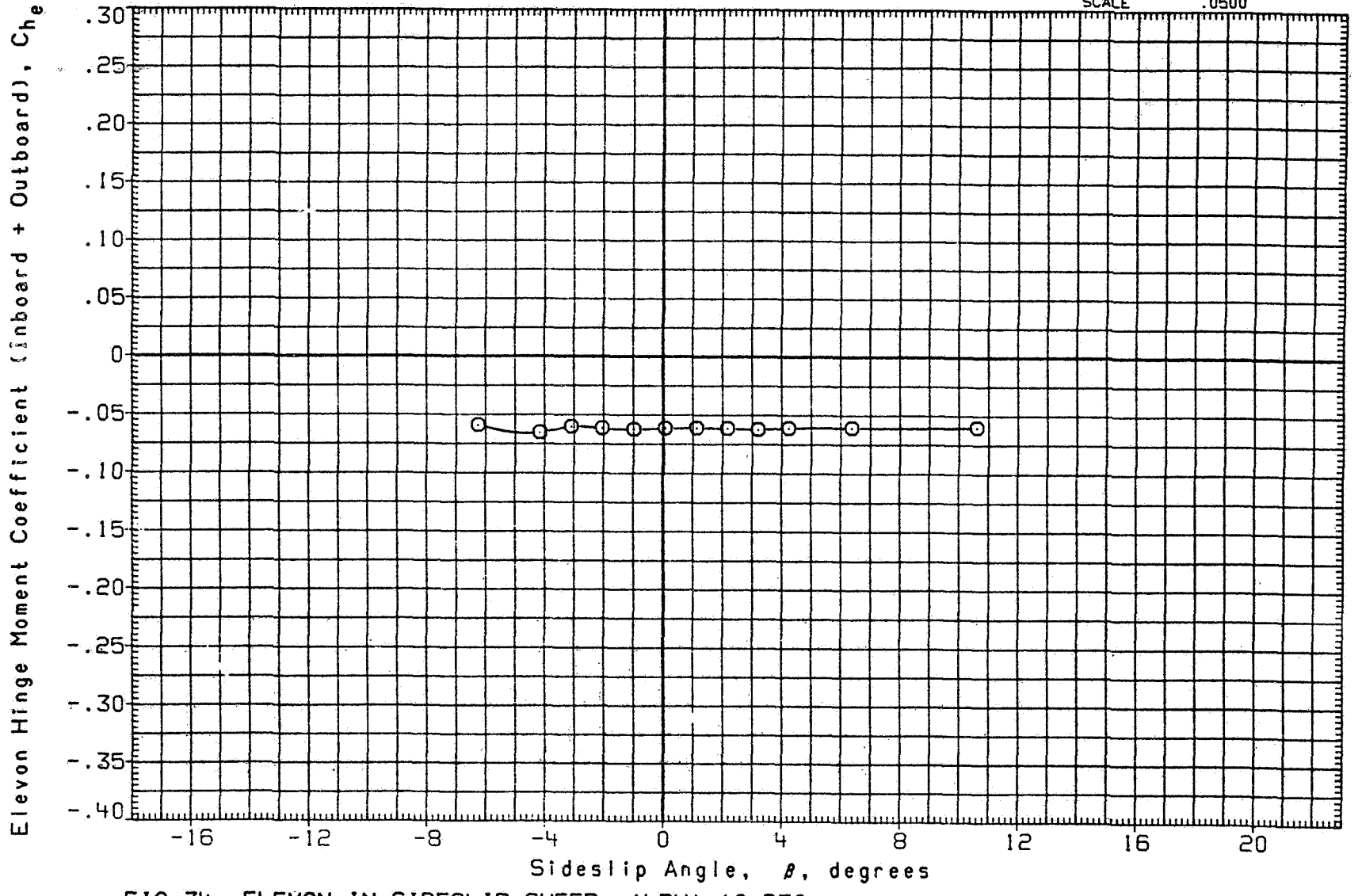


FIG.34 ELEVON IN SIDESLIP SWEEP: ALPHA=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
G2H006	O	AMES 118-1-87 0A145C 01	.000	55.000	.000	10.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

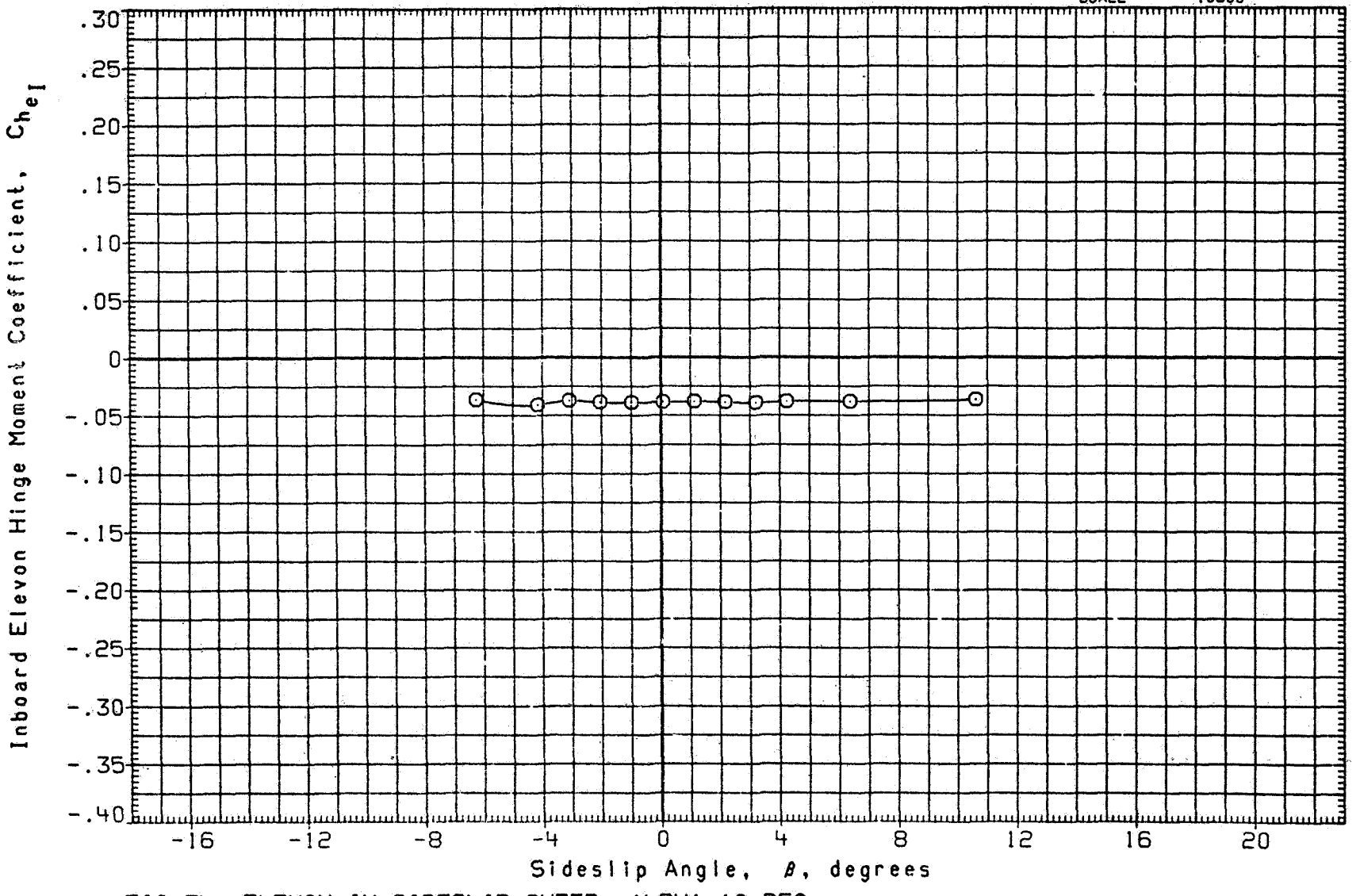


FIG.34 ELEVON IN SIDESLIP SWEEP: ALPHA=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
G2H006	O	AMES 118-1-87 OA145C 01

ELEVON	SPDBRK	BDFLAP	ALPHA
.000	55.000	.000	10.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

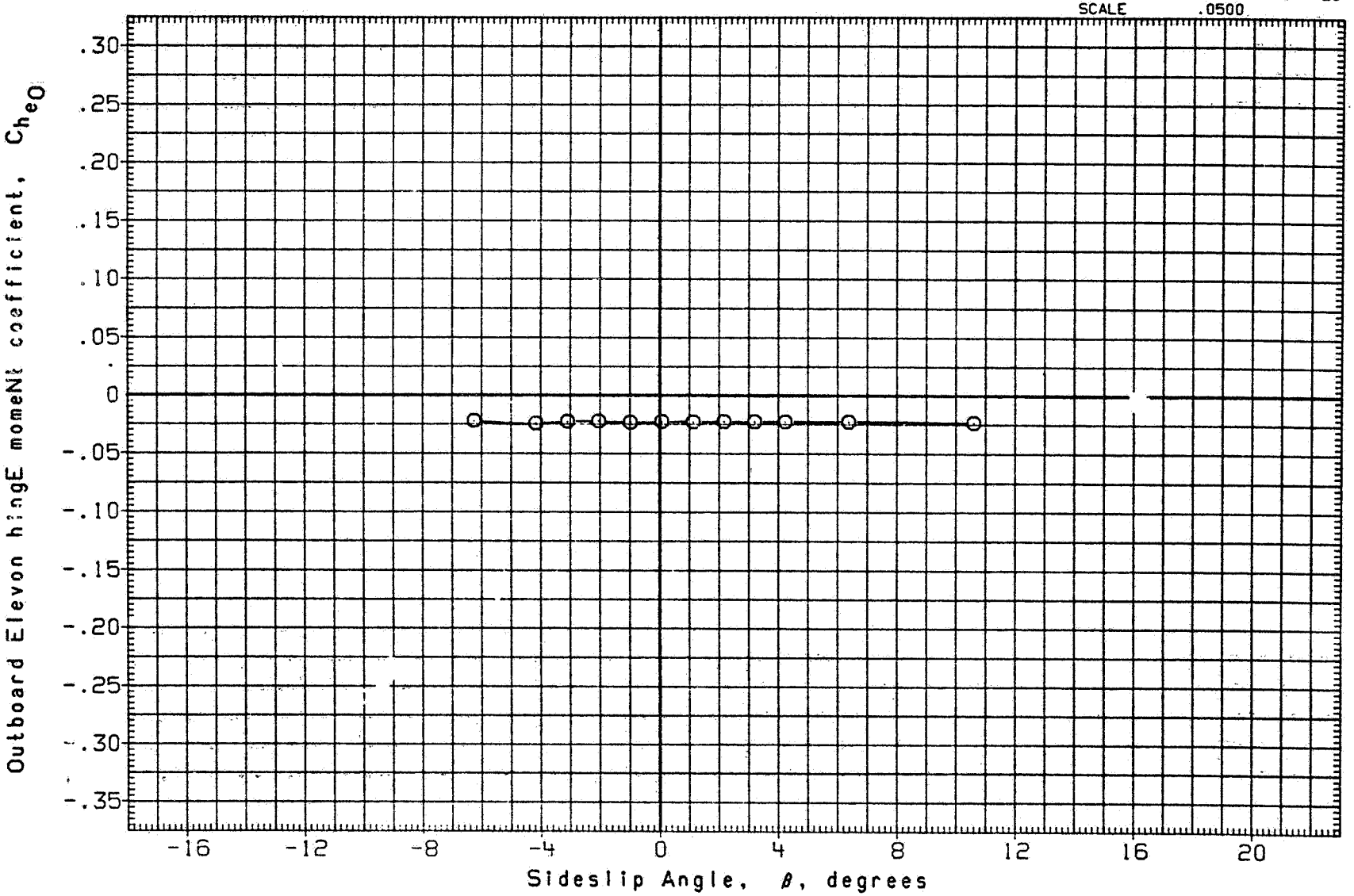


FIG.34 ELEVON IN SIDESLIP SWEEP: ALPHA=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H026	○	AMES 118-1-87 0A145C 01	-10.000	55.000	.000	15.000
R2H007	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H023	◇	AMES 118-1-87 0A145C 01	10.000	55.000	.000	15.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

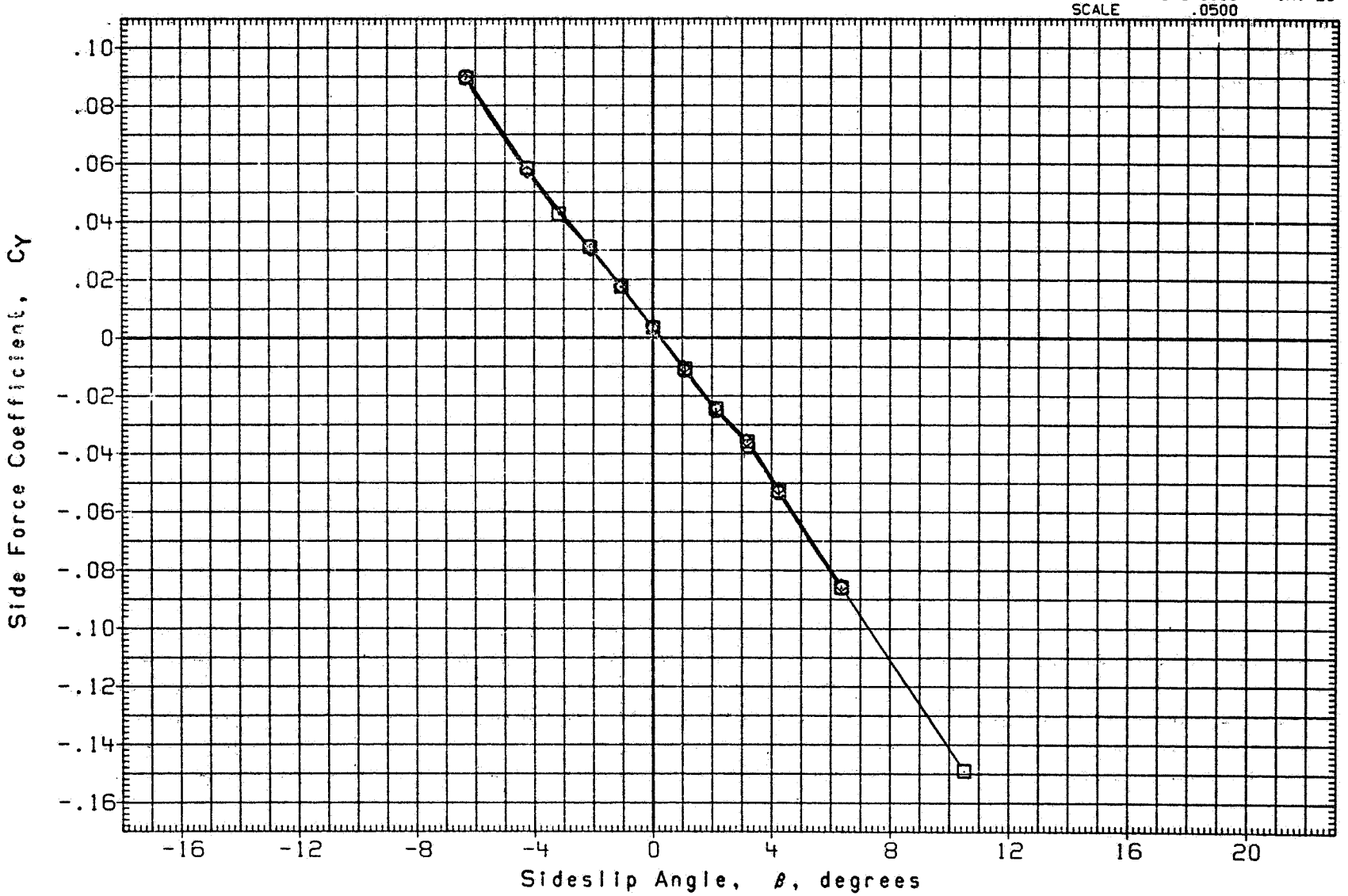


FIG.35 ELEVON IN SIDESLIP SWEEP: ALPHA=15 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBPK	BDFLAP	ALPHA
R2H026	○	AMES 118-1-87 0A145C 01	-10.000	55.000	.000	15.000
R2H007	□	AMES 118-1-87 0A145C 01	.000	55.000	.000	15.000
R2H023	◇	AMES 118-1-87 0A145C 01	10.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

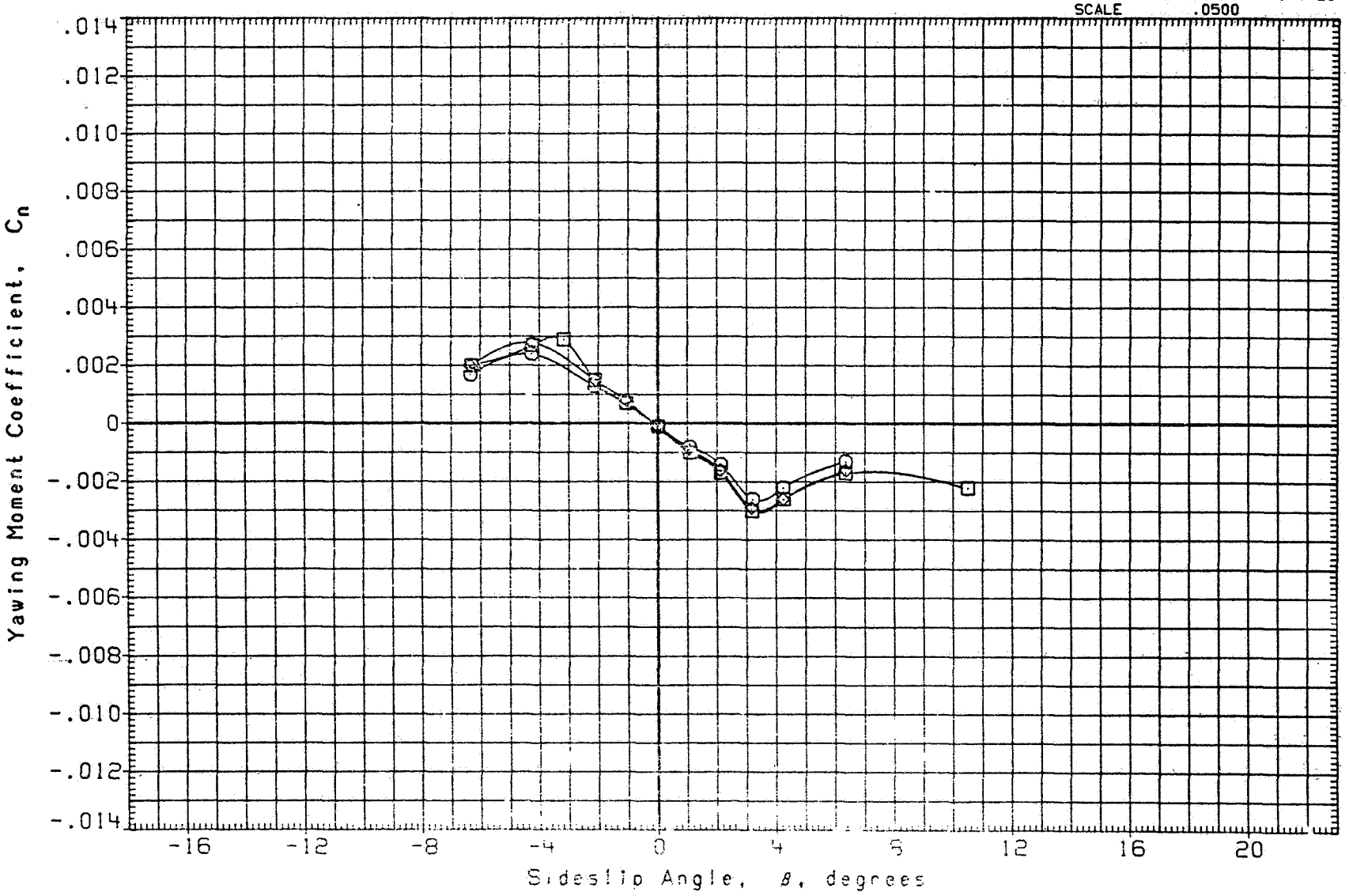


FIG.35 ELEVON IN SIDESLIP SWEEP: ALPHA=15 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H026	○	AMES 118-1-87 0A145C 01	-10.000	55.000	.000	15.000
R2H007	□	AMES 118-1-87 0A145C 01	000	55.000	.000	15.000
R2H023	◇	AMES 118-1-87 0A145C 01	10.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

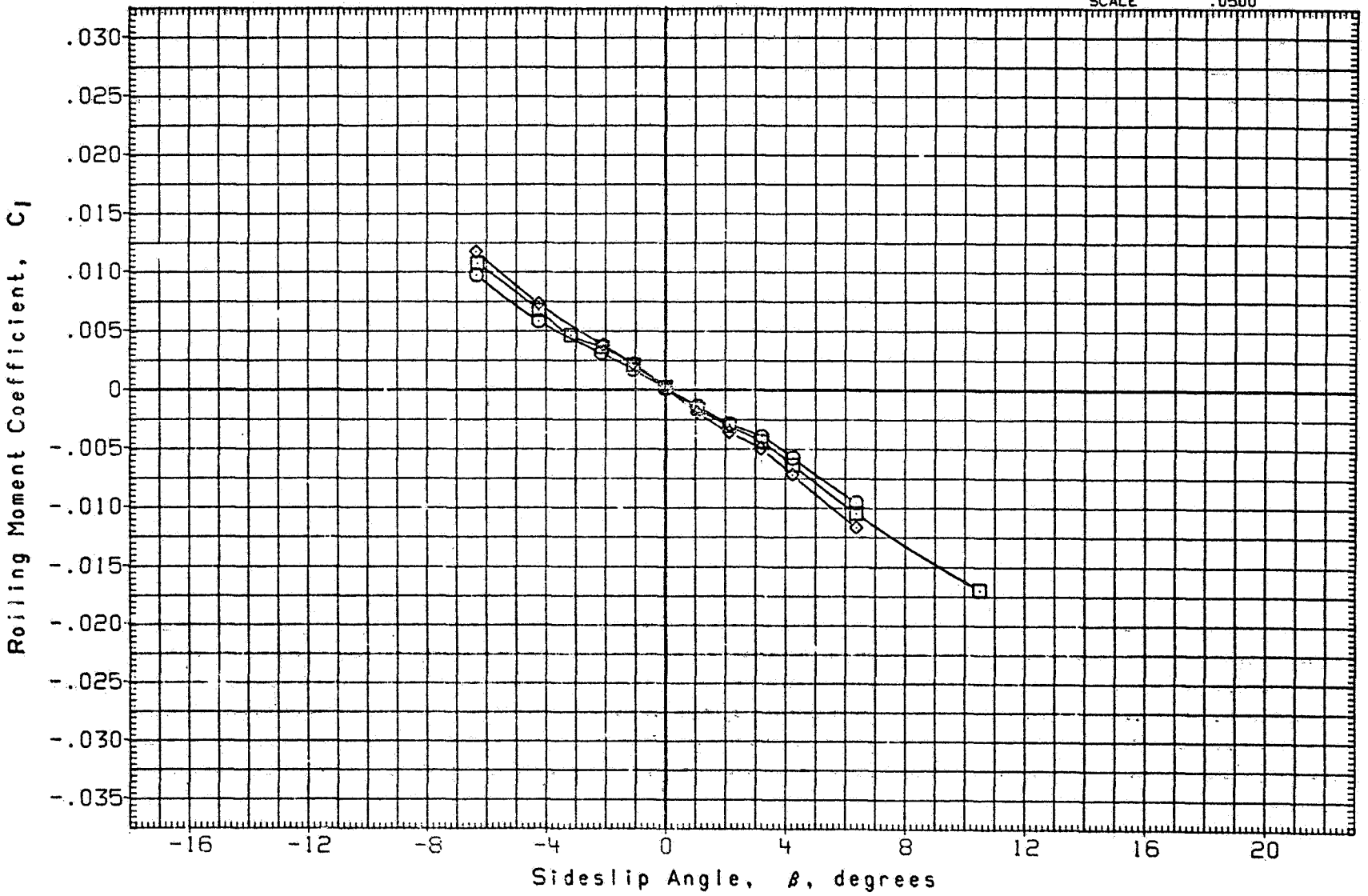


FIG.35 ELEVON IN SIDESLIP SWEEP: ALPHA=15 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
G2H007	O	AMES 118-1-87 0A145C 01	.000	55.000	000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

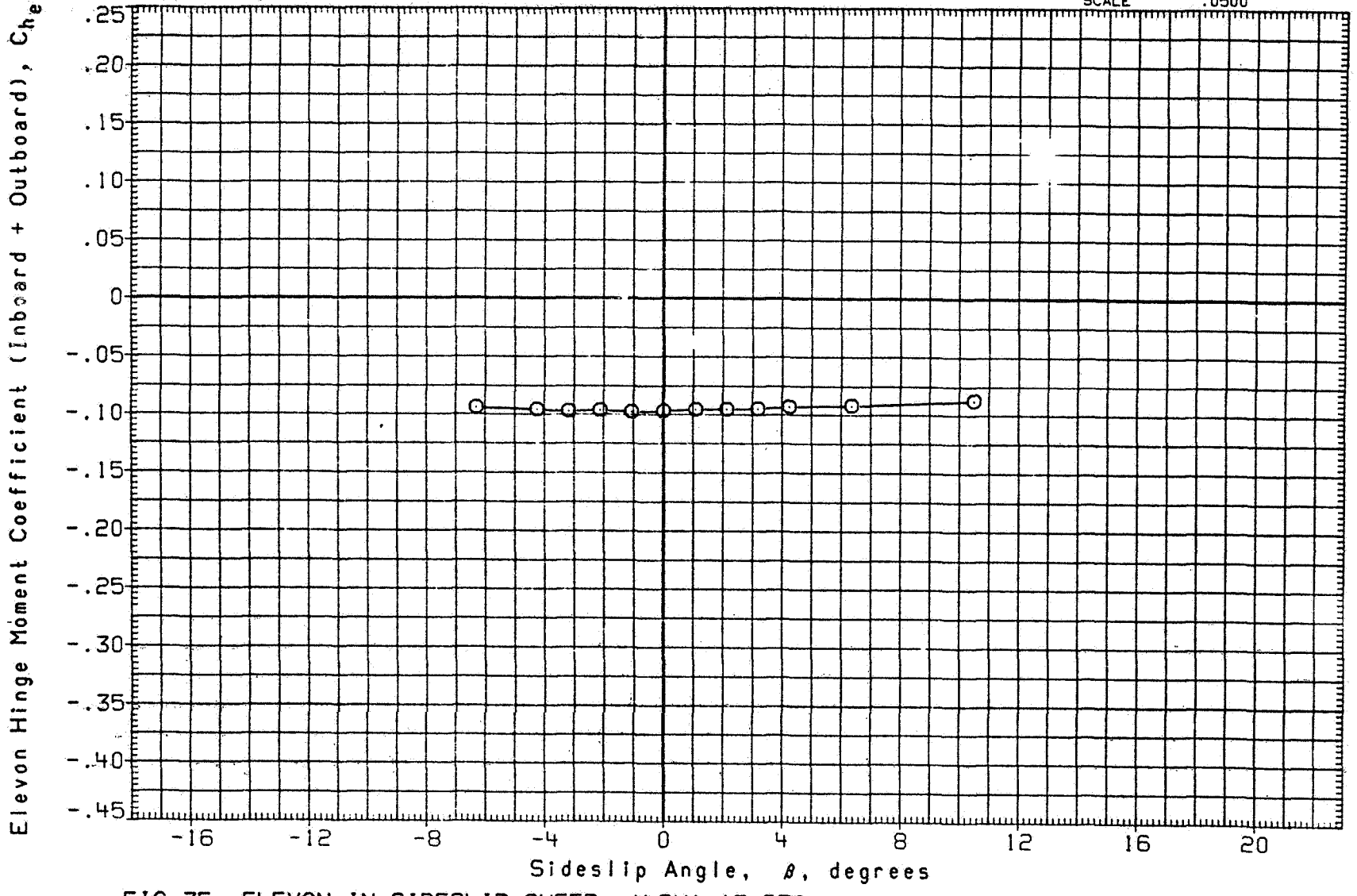


FIG.35 ELEVON IN SIDESLIP SWEEP: ALPHA=15 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
G2H007	O	AMES 118-1-87 0A145C 01	.000	55.000	000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

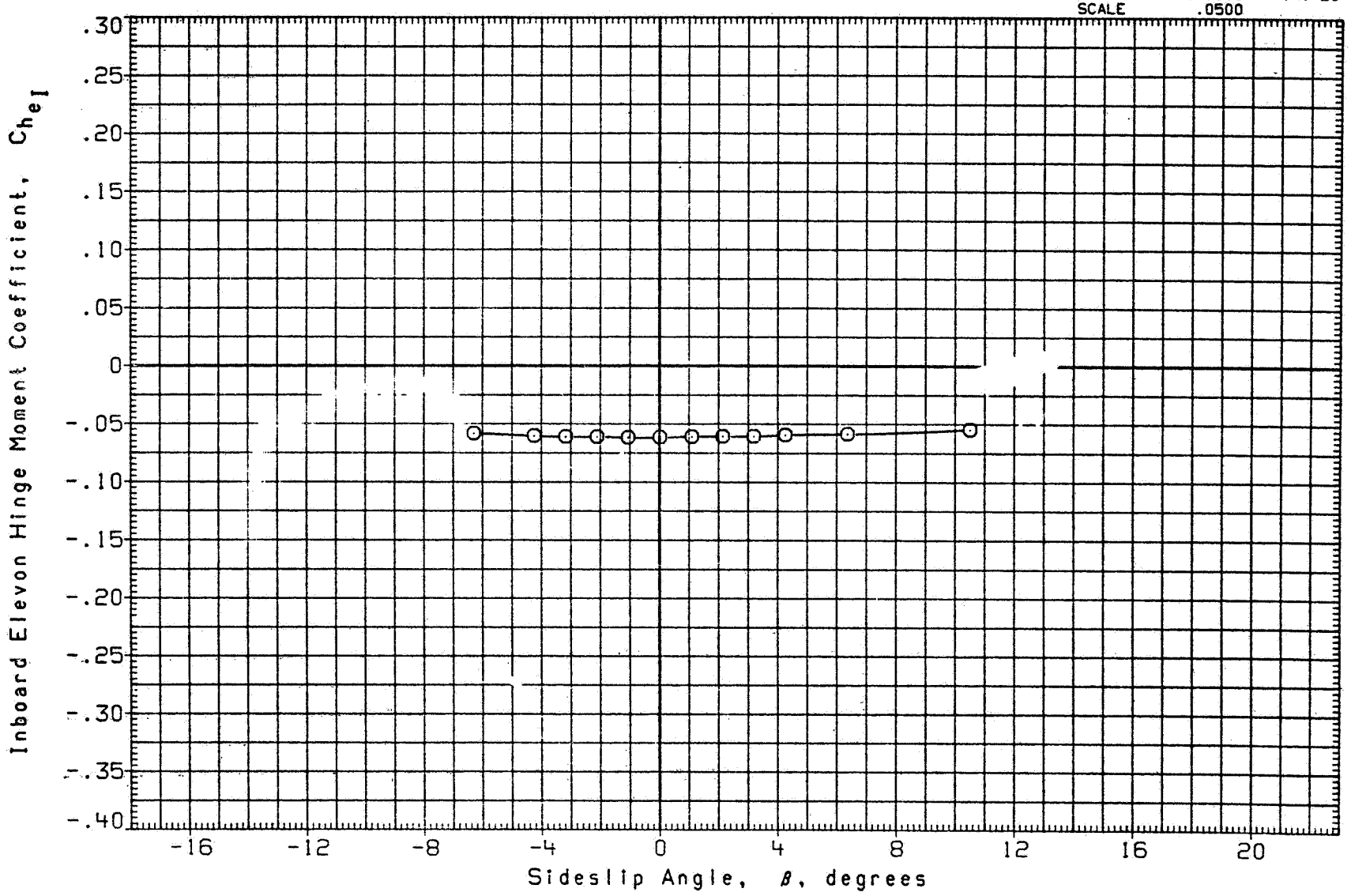


FIG.35 ELEVON IN SIDESLIP SWEEP: ALPHA=15 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPOBRK	BDFLAP	ALPHA
G2H007	O	AMES 118-1-87 OA145C 01	.000	55.000	.000	15.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

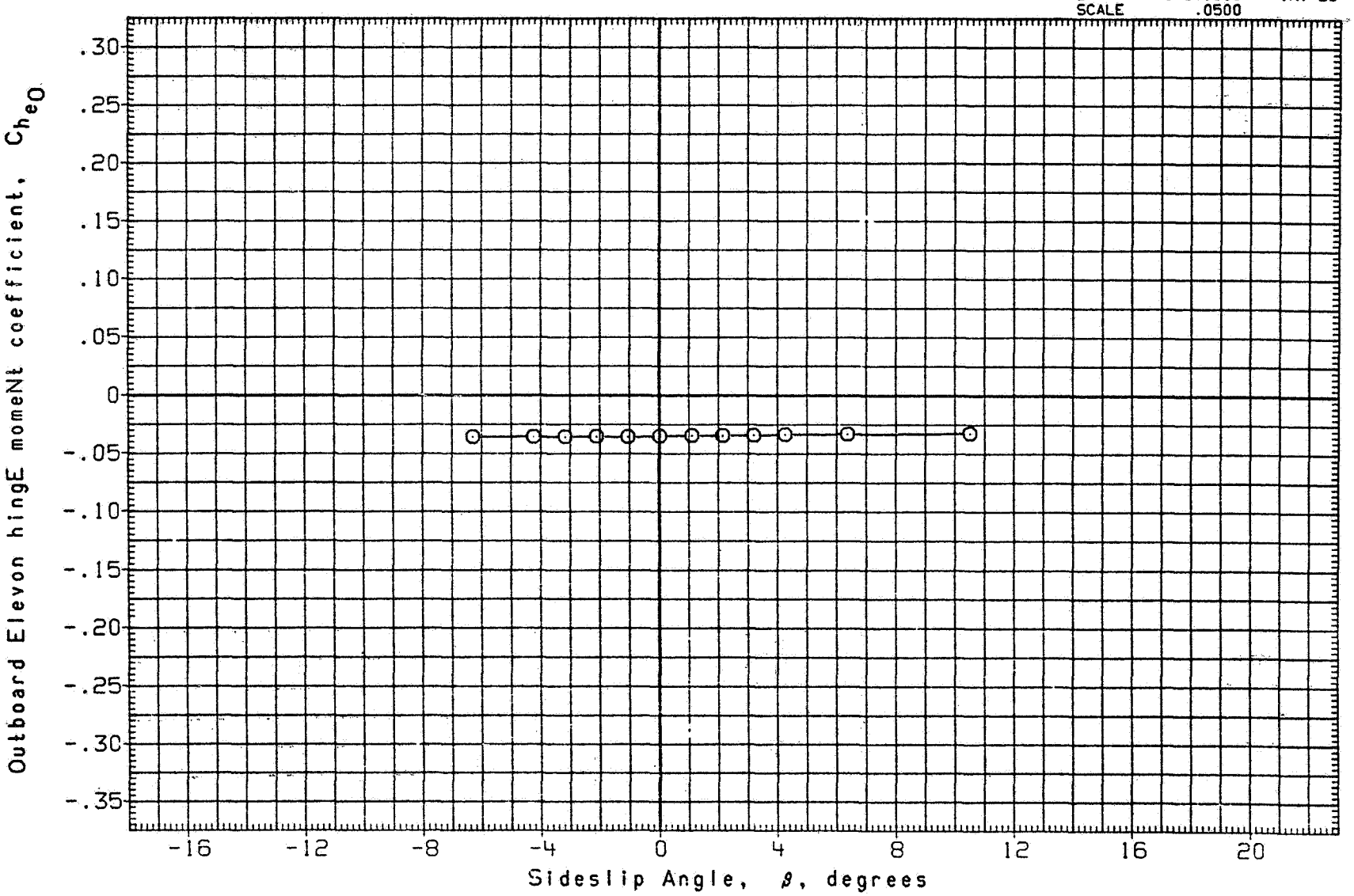


FIG.35 ELEVON IN SIDESLIP SWEEP: ALPHA=15 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H010	○	AMES 118-1-87 0A145C 01	.000	55.000	.000	20.000
R2H024	□	AMES 118-1-87 0A145C 01	10.000	55.000	.000	20.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

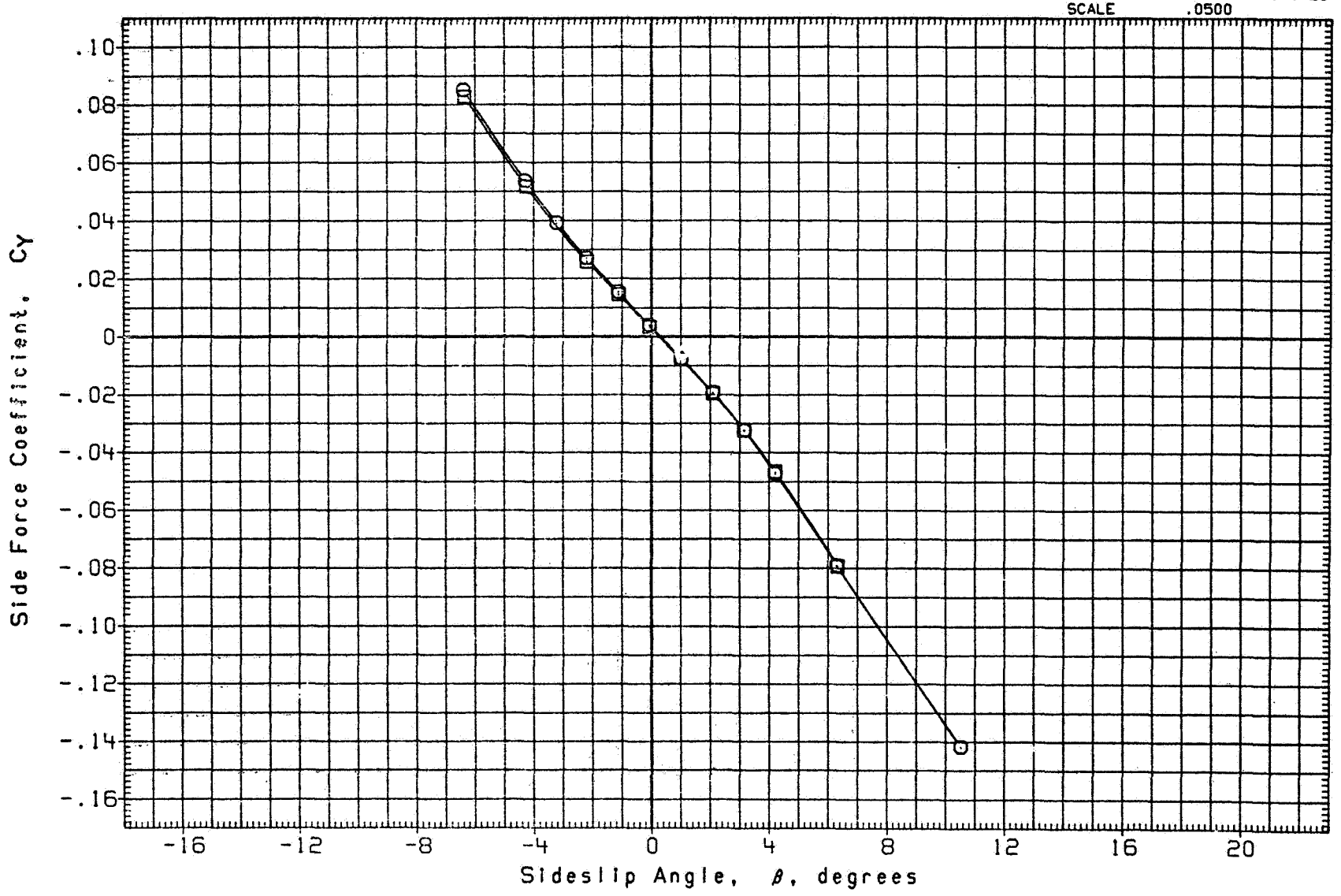


FIG.36 ELEVON IN SIDESLIP SWEEP: ALPHA=20 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H010	○	AMES 118-1-87 0A145C 01	.000	55.000	.000	20.000
R2H024	□	AMES 118-1-87 0A145C 01	10.000	55.000	.000	20.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

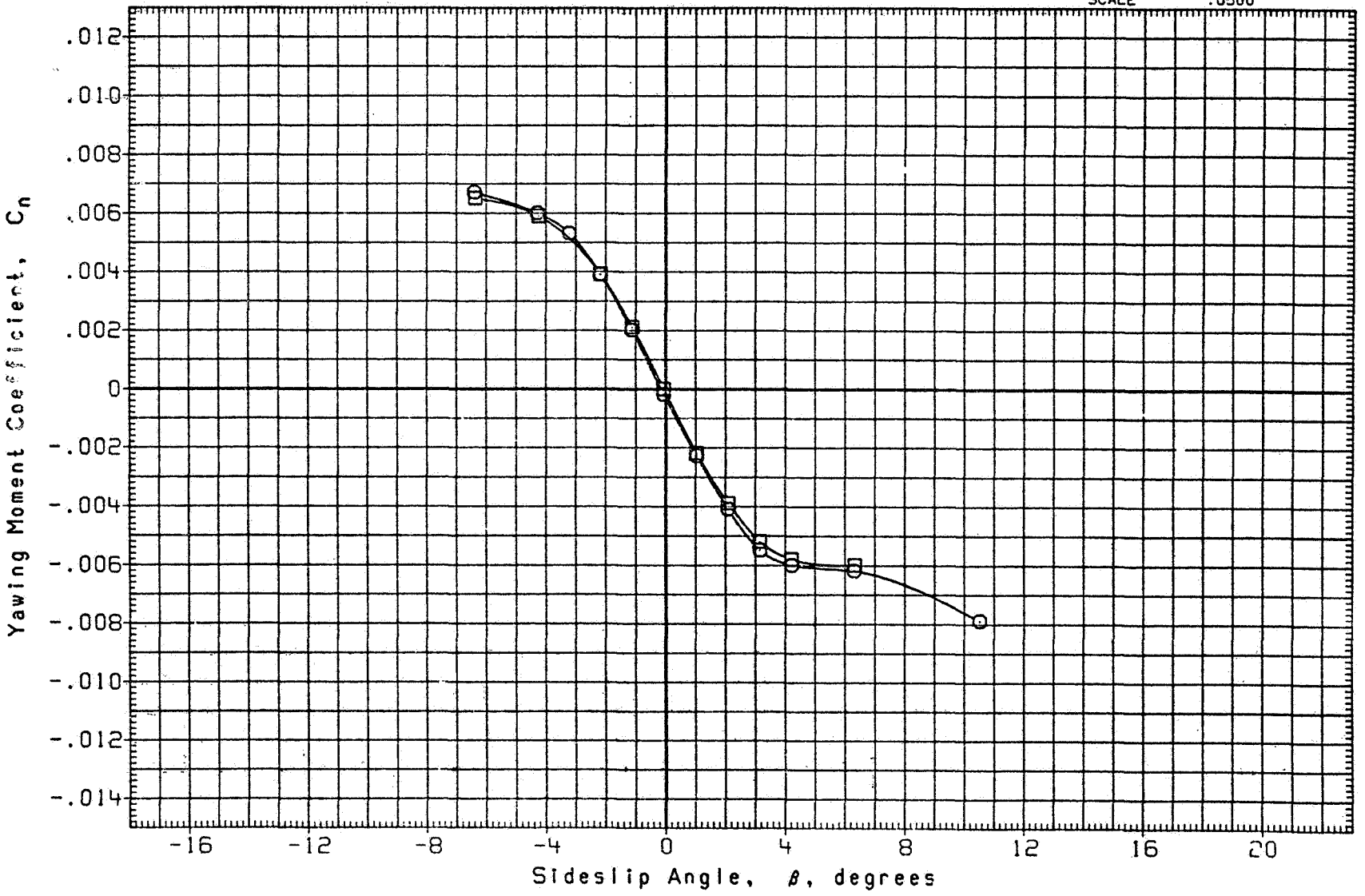


FIG.36 ELEVON IN SIDESLIP SWEEP: ALPHA=20 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
R2H010	○	AMES 118-1-87 OA145C 01	.000	55.000	.000	20.000
R2H024	□	AMES 118-1-87 OA145C 01	10.000	55.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

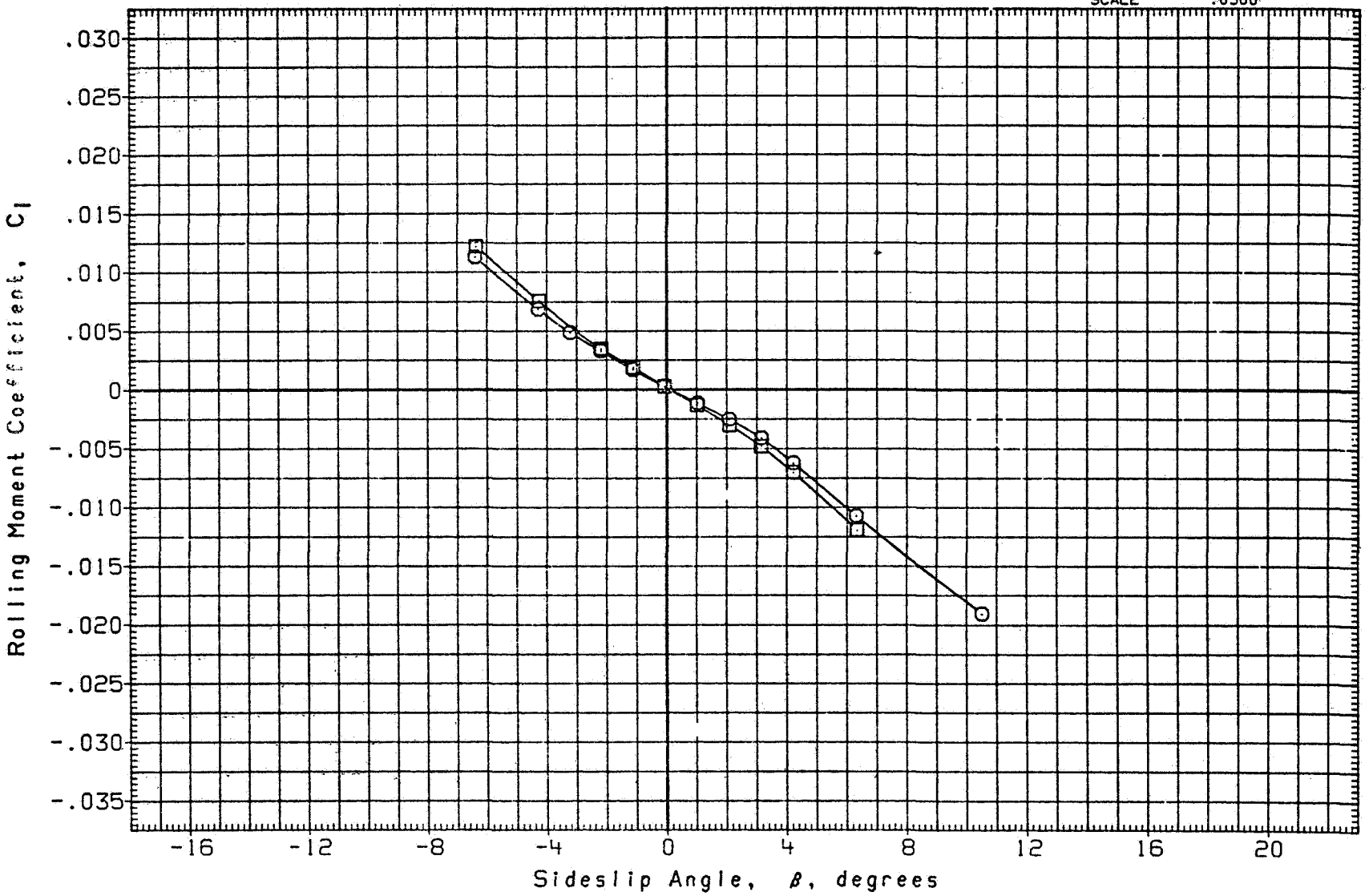


FIG.36 ELEVON IN SIDESLIP SWEEP: ALPHA=20 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
G2H010	○	AMES 118-1-87 0A145C 01

ELEVON	SPDBRK	BDFLAP	ALPHA
.000	55.000	.000	20.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

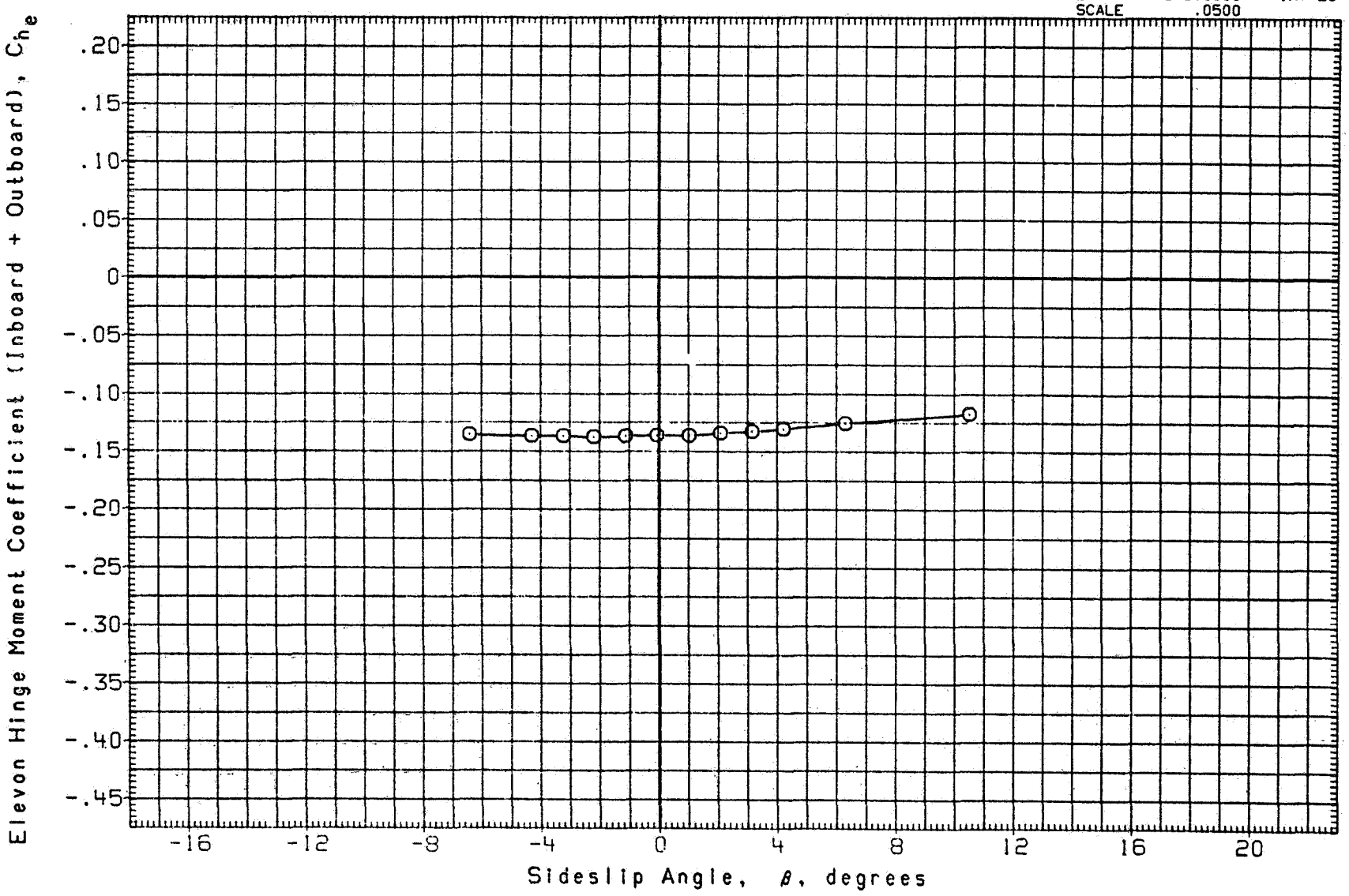


FIG.36 ELEVON IN SIDESLIP SWEEP: ALPHA=20 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ELEVON	SPDBRK	BDFLAP	ALPHA
G2H010	O	AMES 118-I-87 0A145C 01	.000	55.000	.000	20.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

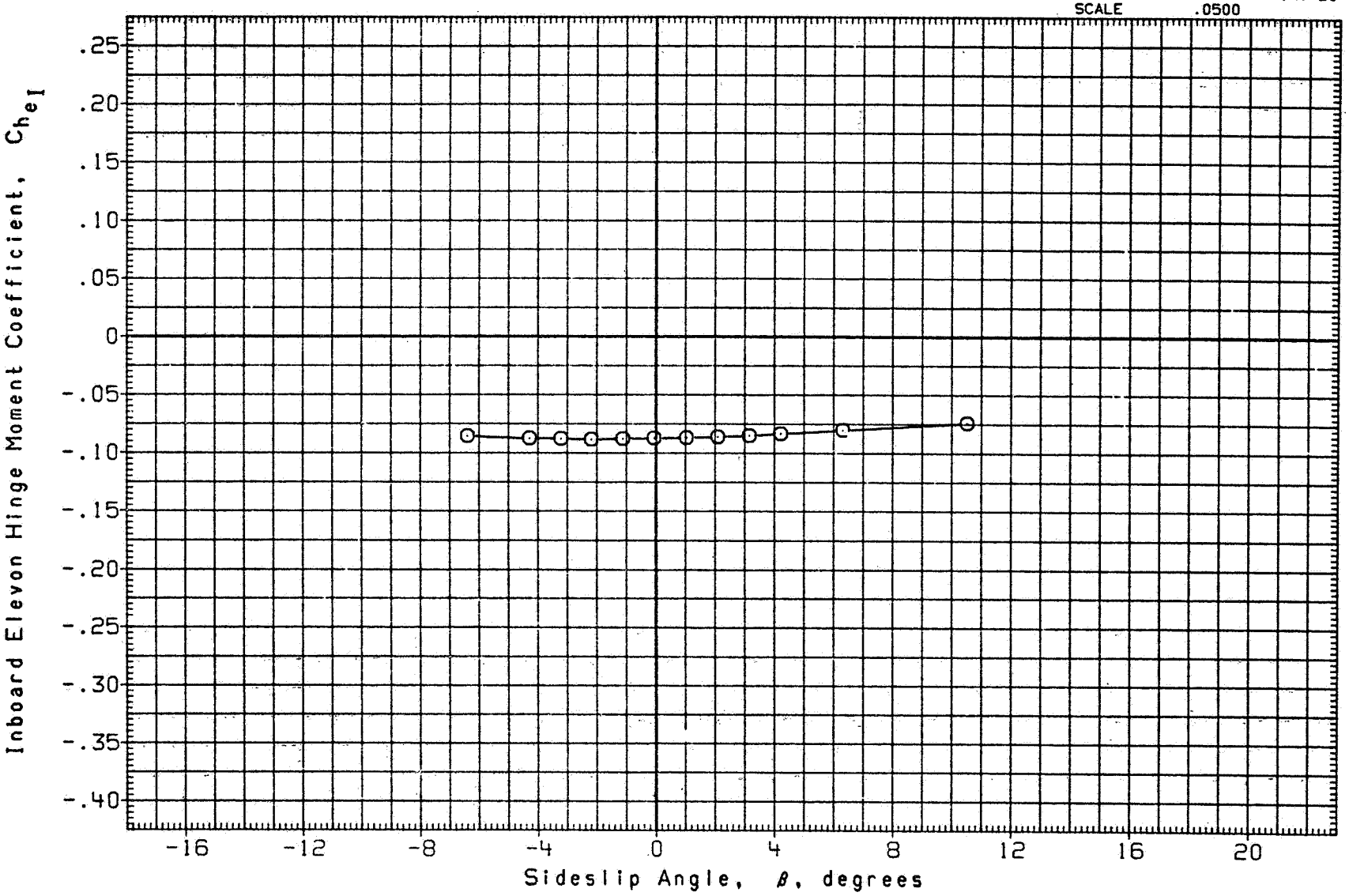


FIG.36 ELEVON IN SIDESLIP SWEEP: ALPHA=20 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION
G2H010	O	AMES 118-1-87 0A145C 01

ELEVON	SPDBRK	BDFLAP	ALPHA
.000	55.000	.000	20.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

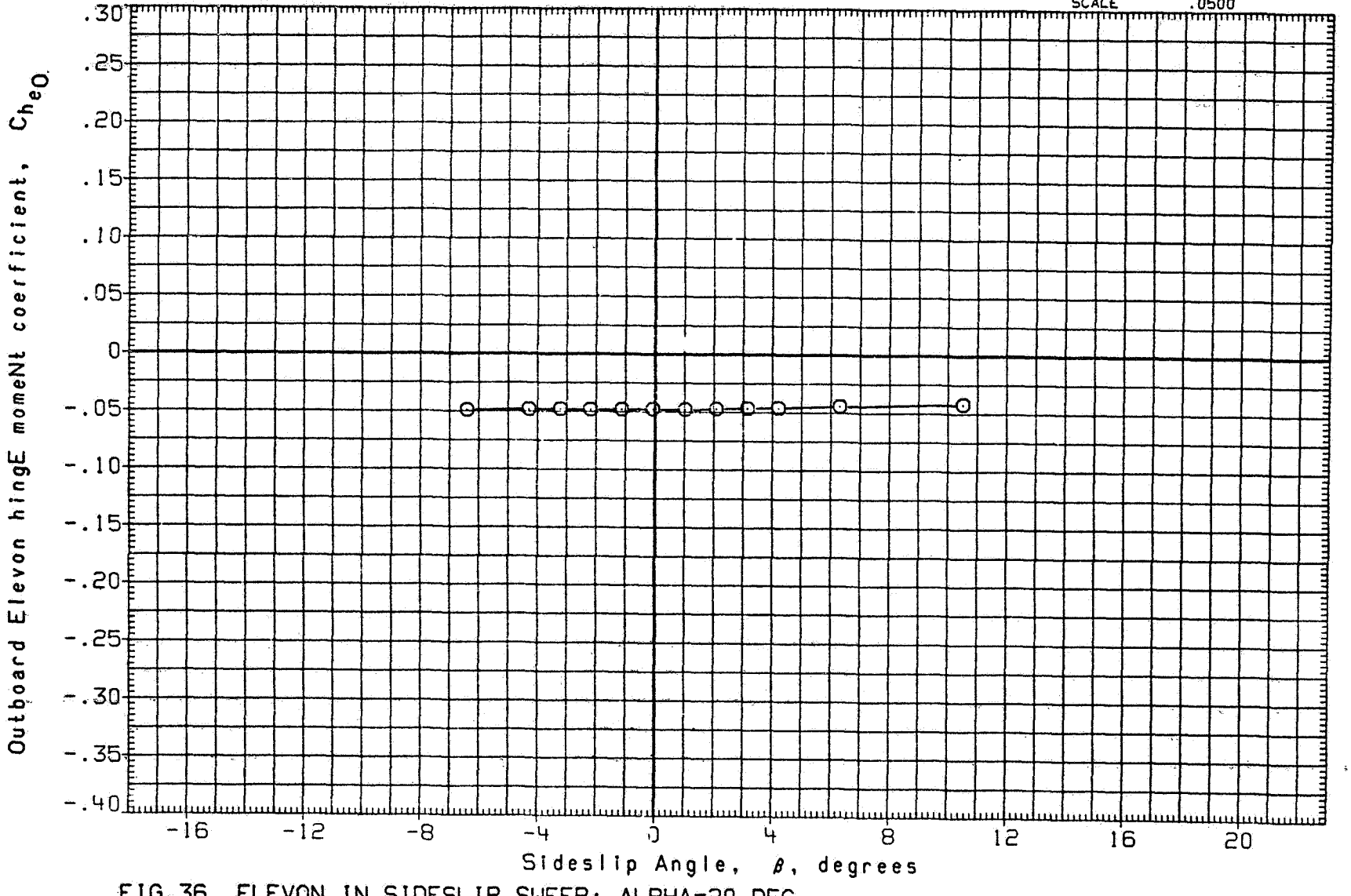


FIG.36 ELEVON IN SIDESLIP SWEEP: ALPHA=20 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	SPDBRK
R2H016	○	AMES 118-1-87 0A145C 01	.000	-10.000	.000	55.000
R2H041	□	AMES 118-1-87 0A145C 01	.000	-10.000	5.000	55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

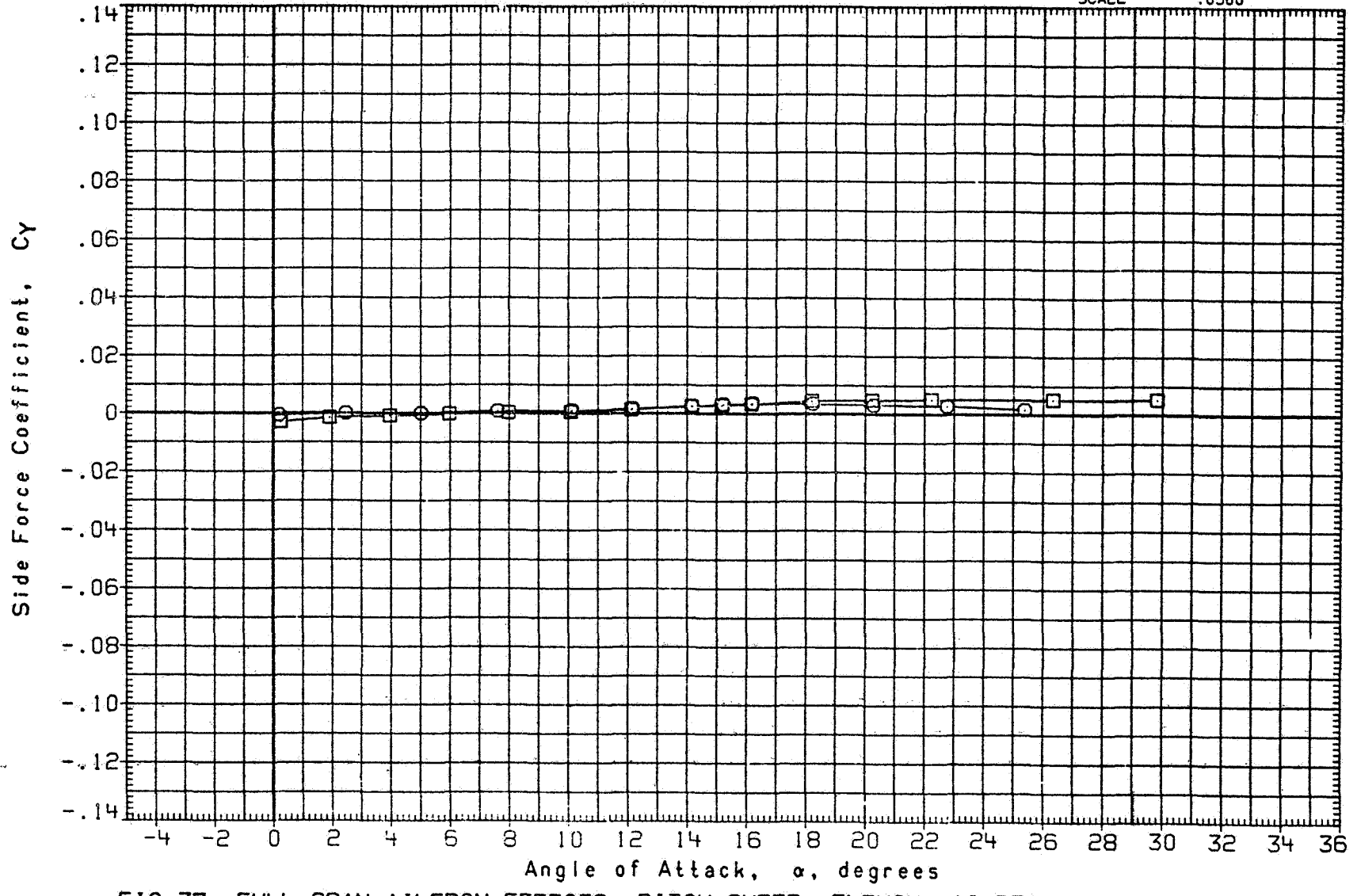


FIG.37 FULL-SPAN AILERON EFFECTS: PITCH SWEEP, ELEVON=-10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	SPDBRK
R2H016	○	AMES 118-1-87 OA145C 01	.000	-10.000	.000	55.000
R2H041	□	AMES 118-1-87 OA145C 01	.000	-10.000	5.000	55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

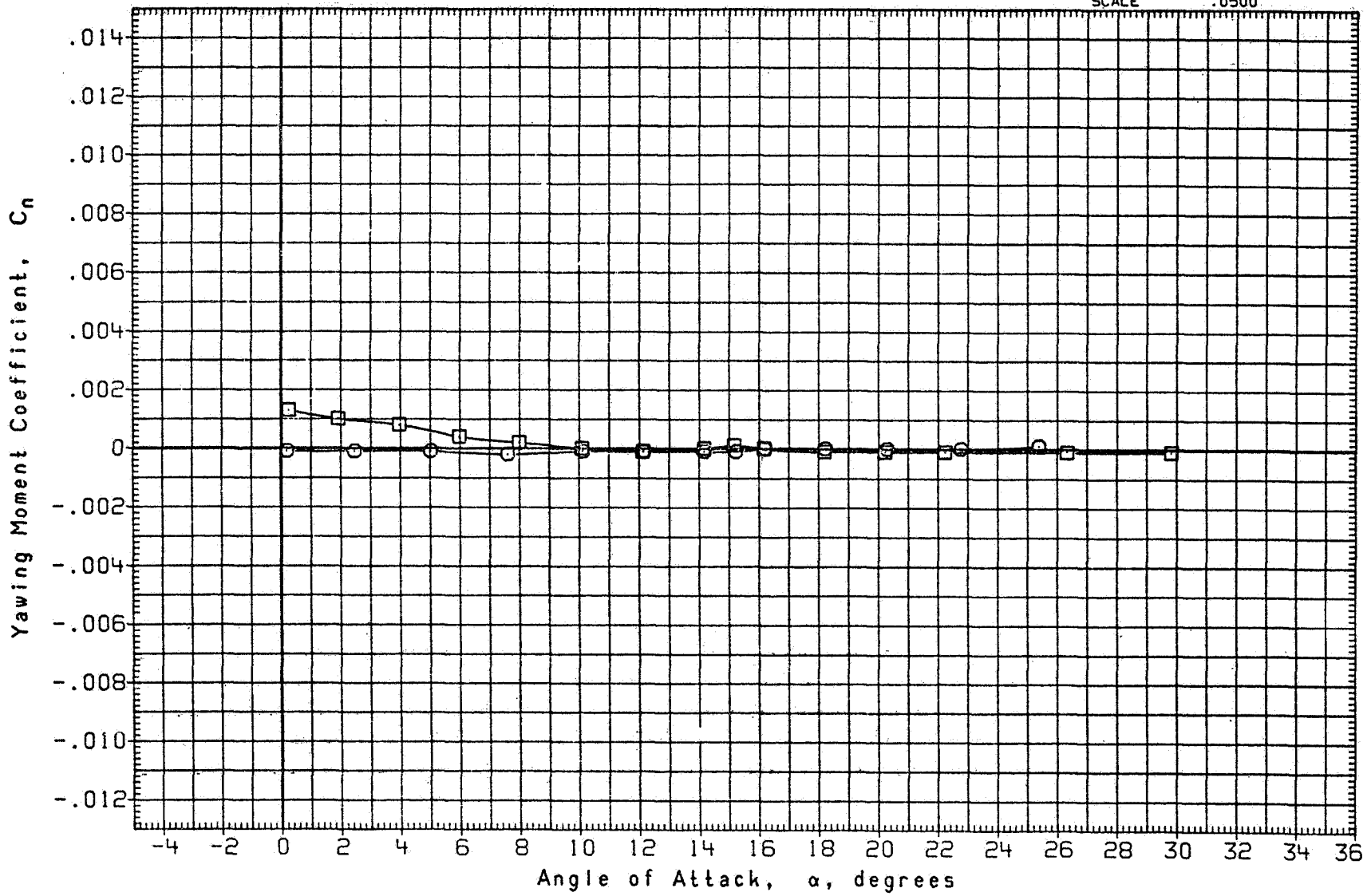


FIG.37 FULL-SPAN AILERON EFFECTS: PITCH SWEEP, ELEVON=-10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	SPDBRK
R2H016	○	AMES 118-1-87 0A145C 01	.000	-10.000	.000	55.000
R2H041	□	AMES 118-1-87 0A145C 01	.000	-10.000	5.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

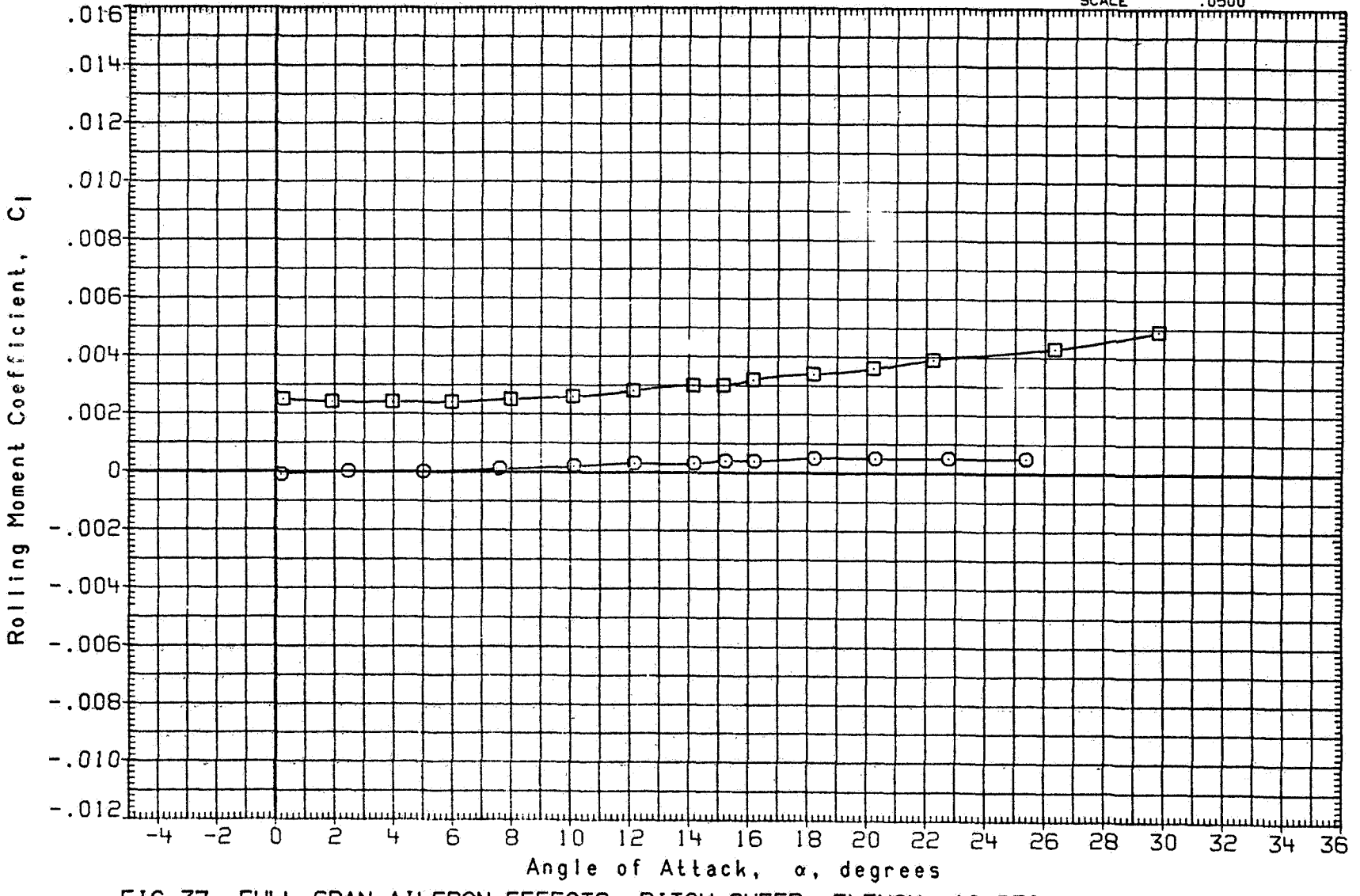


FIG.37 FULL-SPAN AILERON EFFECTS: PITCH SWEEP, ELEVON=-10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	SPDBRK
R2H002	○	AMES 118-1-87 OA145C 01	.000	.000	.000	55.000
R2H034	□	AMES 118-1-87 OA145C 01	.000	.000	5.000	55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

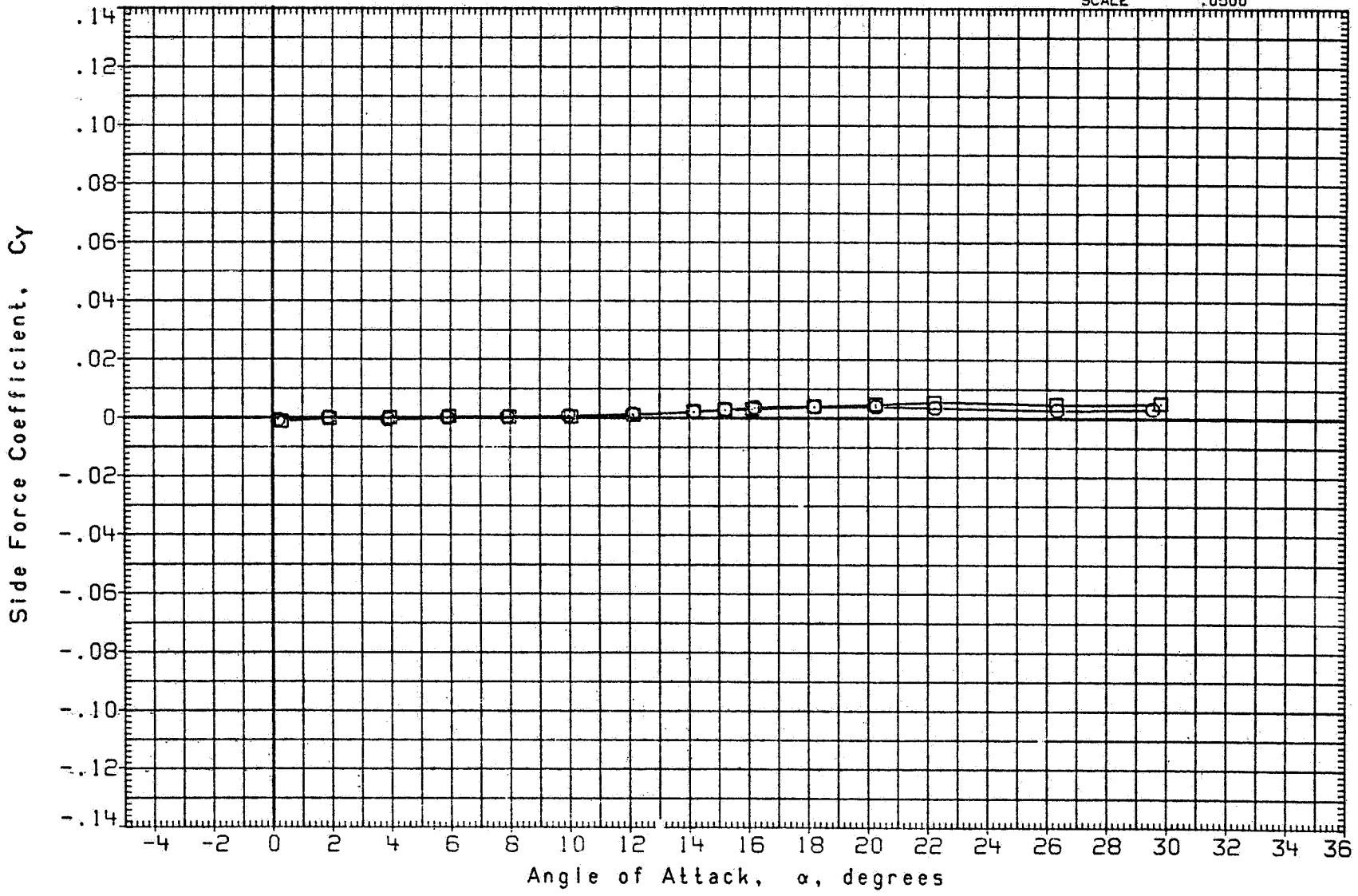


FIG.38 FULL-SPAN AILERON EFFECTS: PITCH SWEEP, ELEVON=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	SPDBRK
R2H002	○	AMES 118-1-87 0A145C 01	.000	.000	.000	55.000
R2H034	□	AMES 118-1-87 0A145C 01	.000	.000	5.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

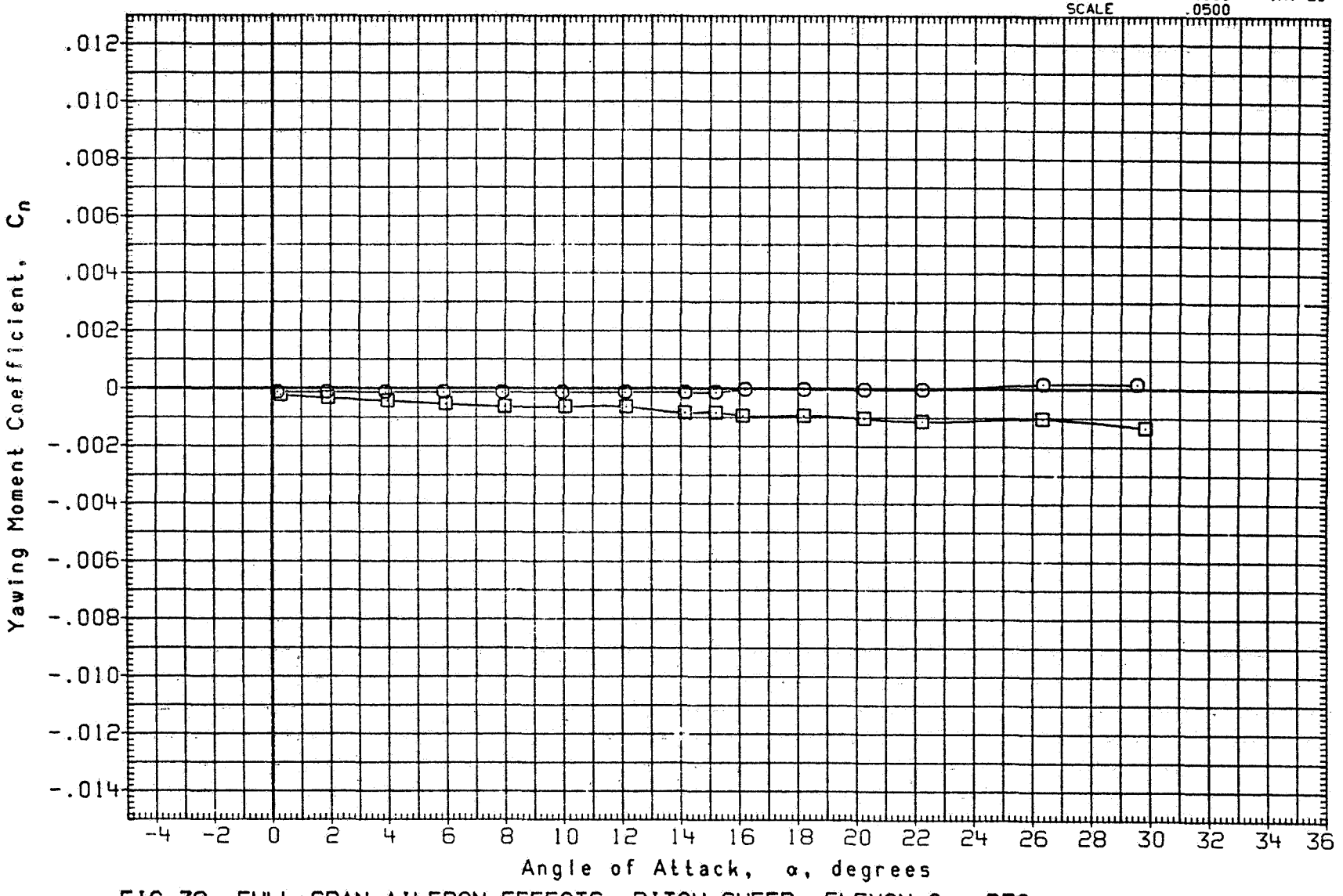


FIG.38 FULL-SPAN AILERON EFFECTS: PITCH SWEEP, ELEVON=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	SPDBRK
R2H002	○	AMES 118-1-87 OA145C 01	.000	.000	.000	55.000
R2H034	□	AMES 118-1-87 OA145C 01	.000	.000	5.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

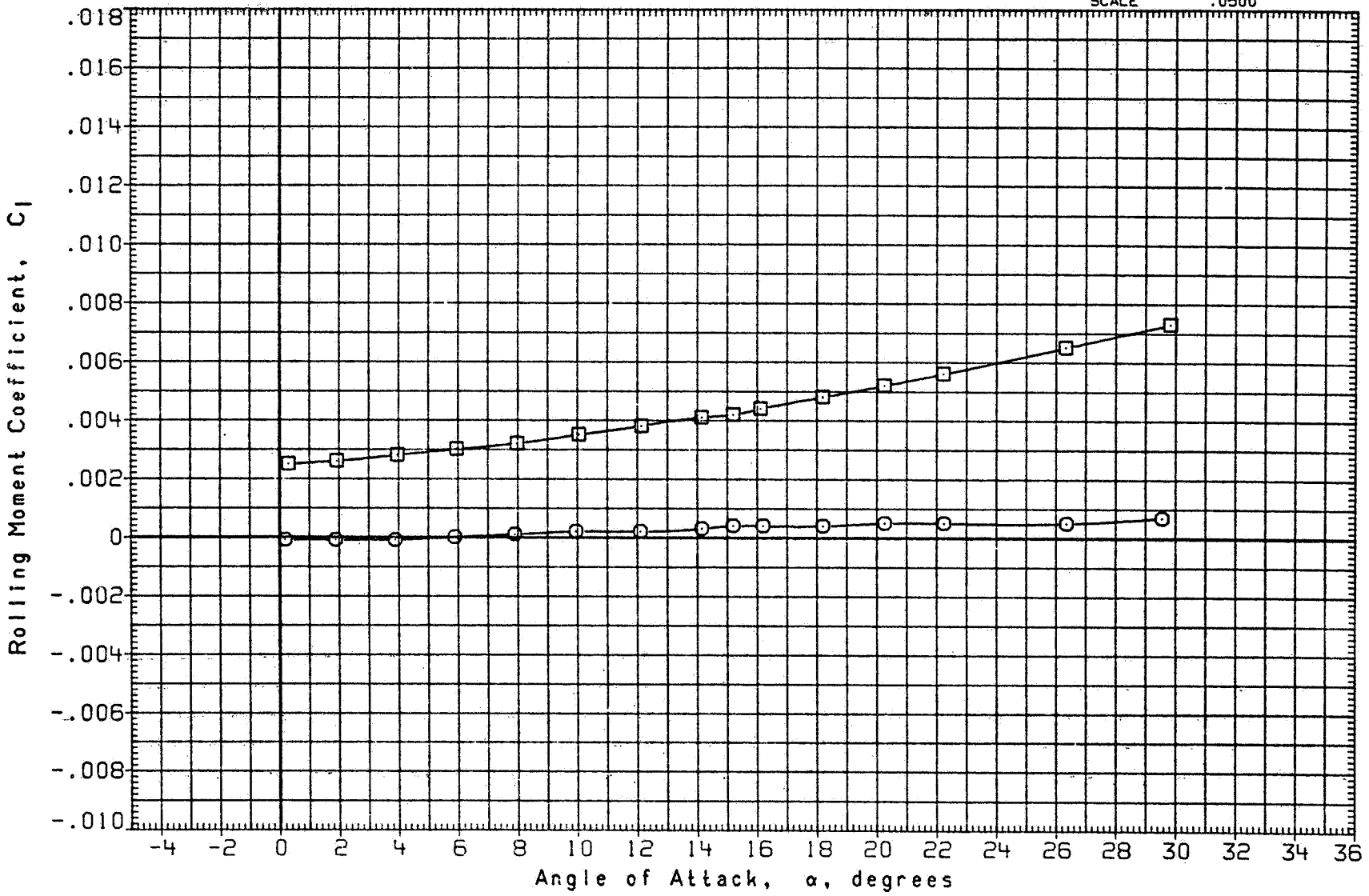


FIG.38 FULL-SPAN AILERON EFFECTS: PITCH SWEEP, ELEVON=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	SPDBRK
R2H013	○	AMES 118-1-87 OA145C 01	.000	10.000	.000	55.000
R2H045	□	AMES 118-1-87 OA145C 01	.000	10.000	5.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

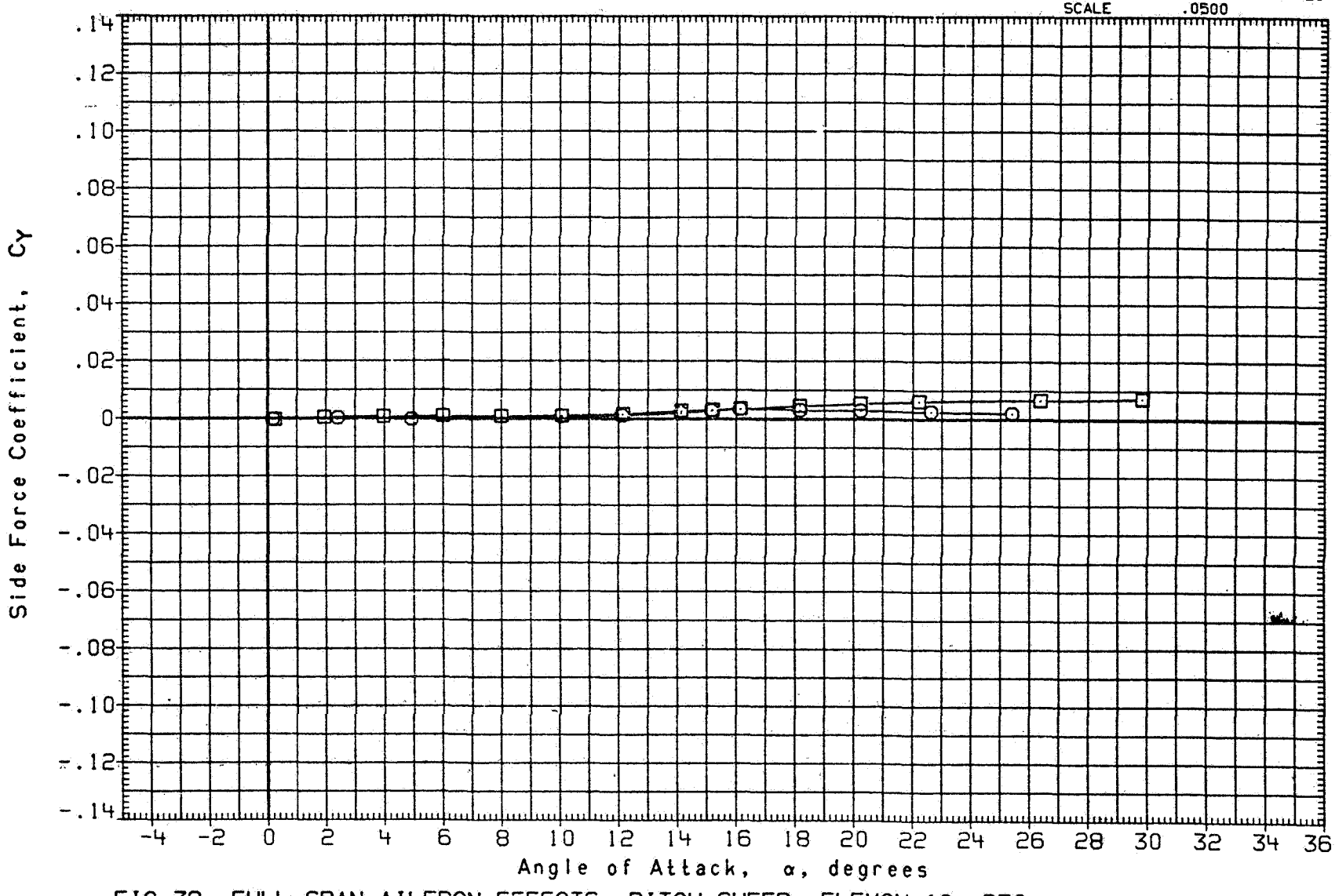


FIG.39 FULL-SPAN AILERON EFFECTS: PITCH SWEEP, ELEVON=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	SPDBRK
R2H013	○	AMES 118-1-87 0A145C 01	.000	10.000	.000	55.000
R2H045	□	AMES 118-1-87 0A145C 01	.000	10.000	5.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

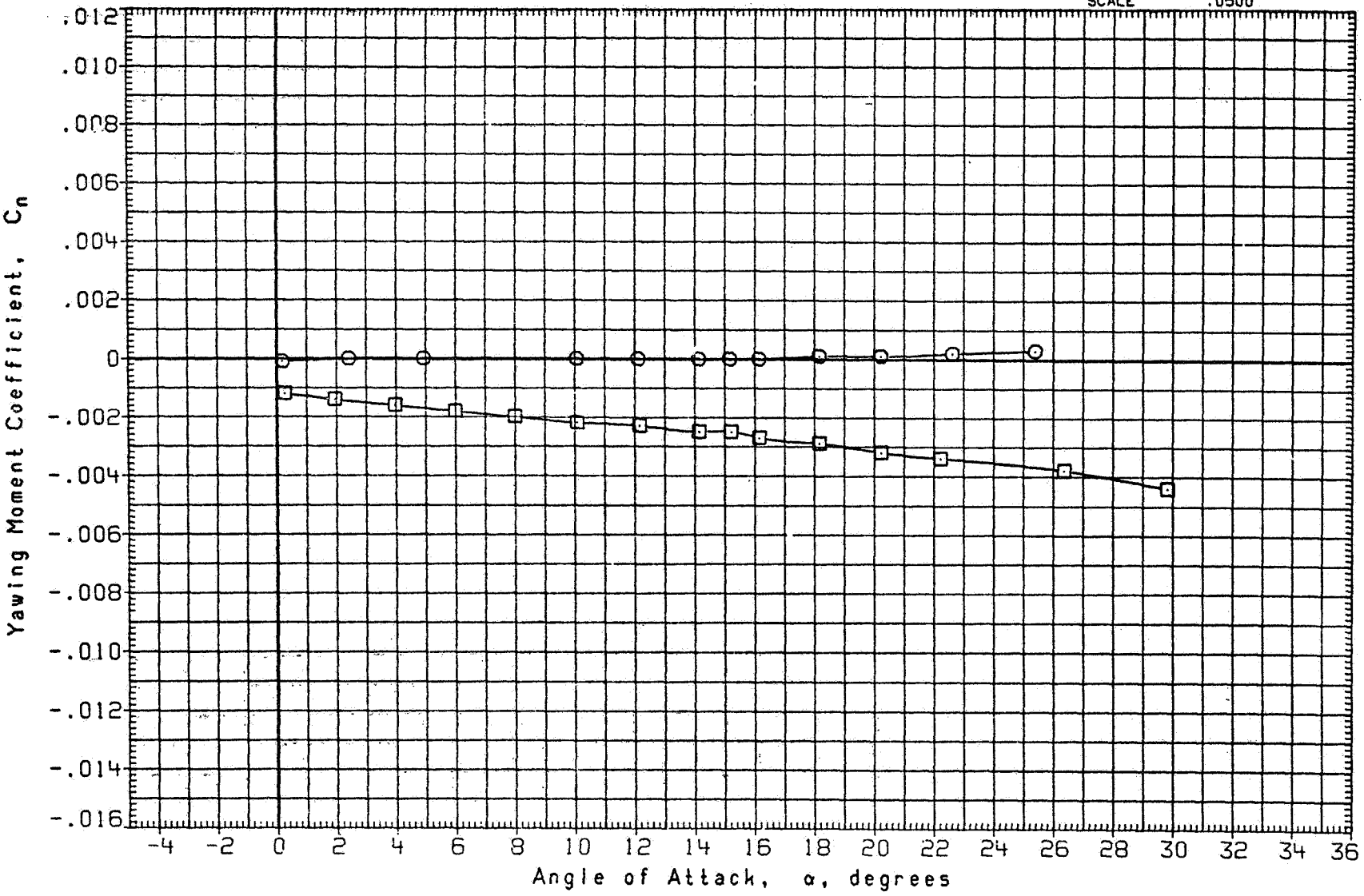


FIG.39 FULL-SPAN AILERON EFFECTS: PITCH SWEEP, ELEVON=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	BETA	ELEVON	AILRON	SPDBRK
R2H013	○	AMES 118-1-87 0A145C 01	.000	10.000	000	55.000
R2H045	□	AMES 118-1-87 0A145C 01	.000	10.000	5.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

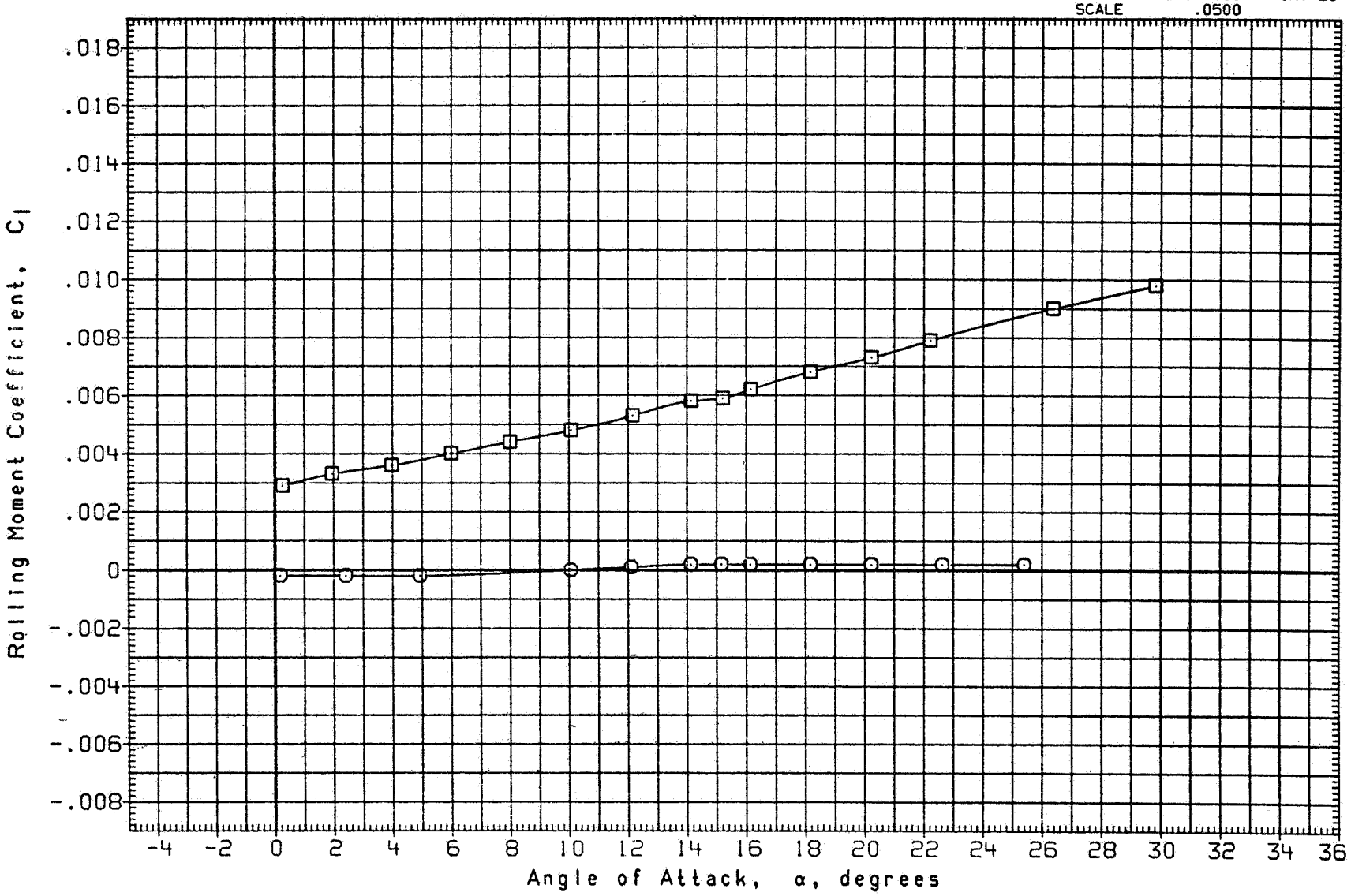


FIG.39 FULL-SPAN AILERON EFFECTS: PITCH SWEEP, ELEVON=10 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	AILRON	SPDBRK
R2H019	○	AMES 118-1-87 0A145C 01	10.000	.000	.000	55.000
R2H035	□	AMES 118-1-87 0A145C 01	10.000	.000	5.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

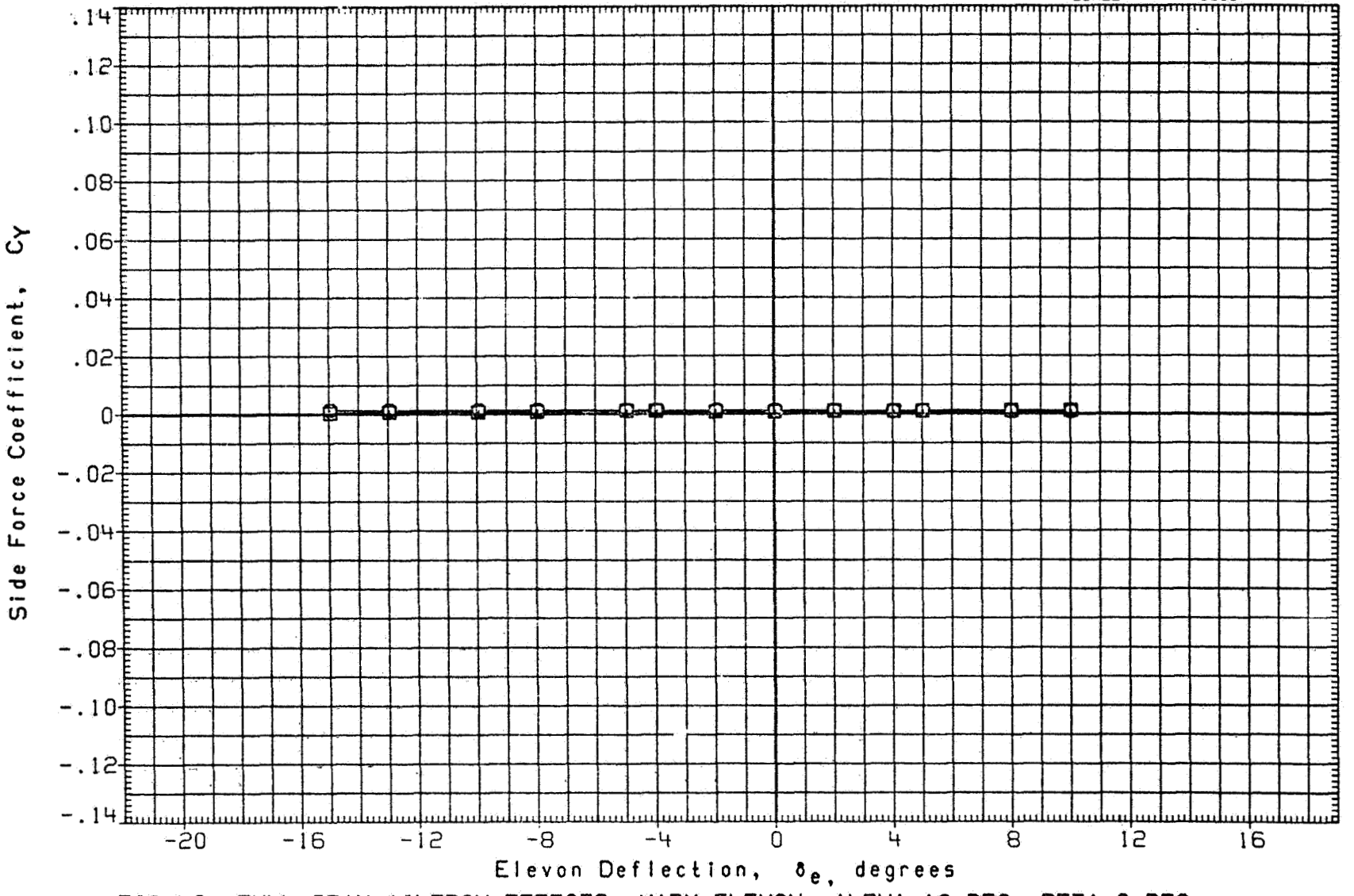


FIG.40 FULL-SPAN AILERON EFFECTS: VARY ELEVON, ALPHA=10 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	AILRON	SPDBRK
R2H019	○	AMES 118-1-87 0A145C 01	10.000	.000	.000	55.000
R2H035	□	AMES 118-1-87 0A145C 01	10.000	.000	5.000	55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

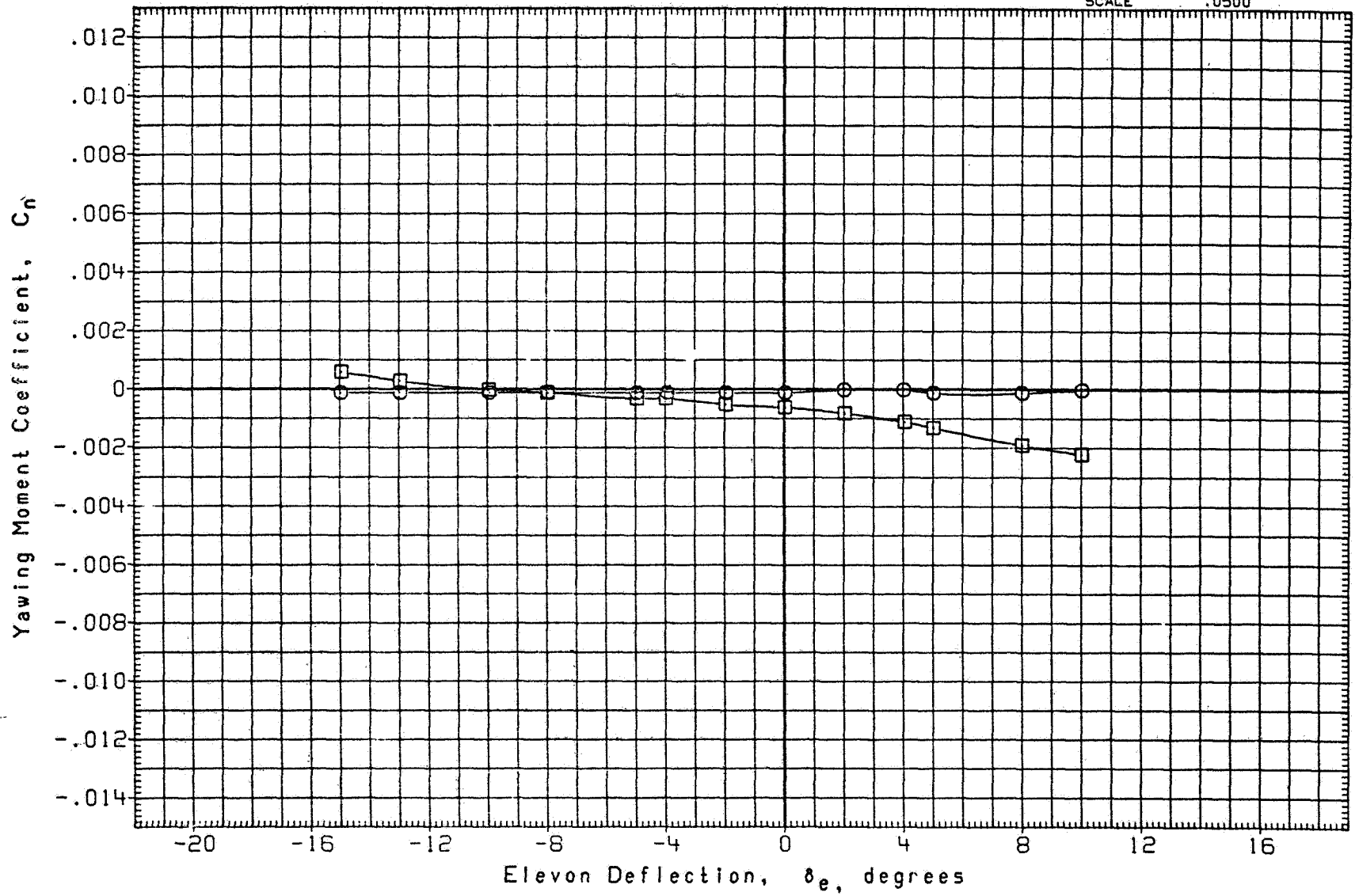


FIG.40 FULL-SPAN AILERON EFFECTS: VARY ELEVON, ALPHA=10 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	AILRON	SPDBRK
R2H019	○	AMES 118-1-87 0A145C 01	10.000	.000	000	55.000
R2H035	□	AMES 118-1-87 0A145C 01	10.000	.000	5.000	55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

FIG.40 FULL-SPAN AILERON EFFECTS: VARY ELEVON, ALPHA=10 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	AILRON	SPDBRK
R2H020	○	AMES 118-1-87 0A145C 01	15.000	.000	.000	55.000
R2H036	□	AMES 118-1-87 0A145C 01	15.000	.000	5.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

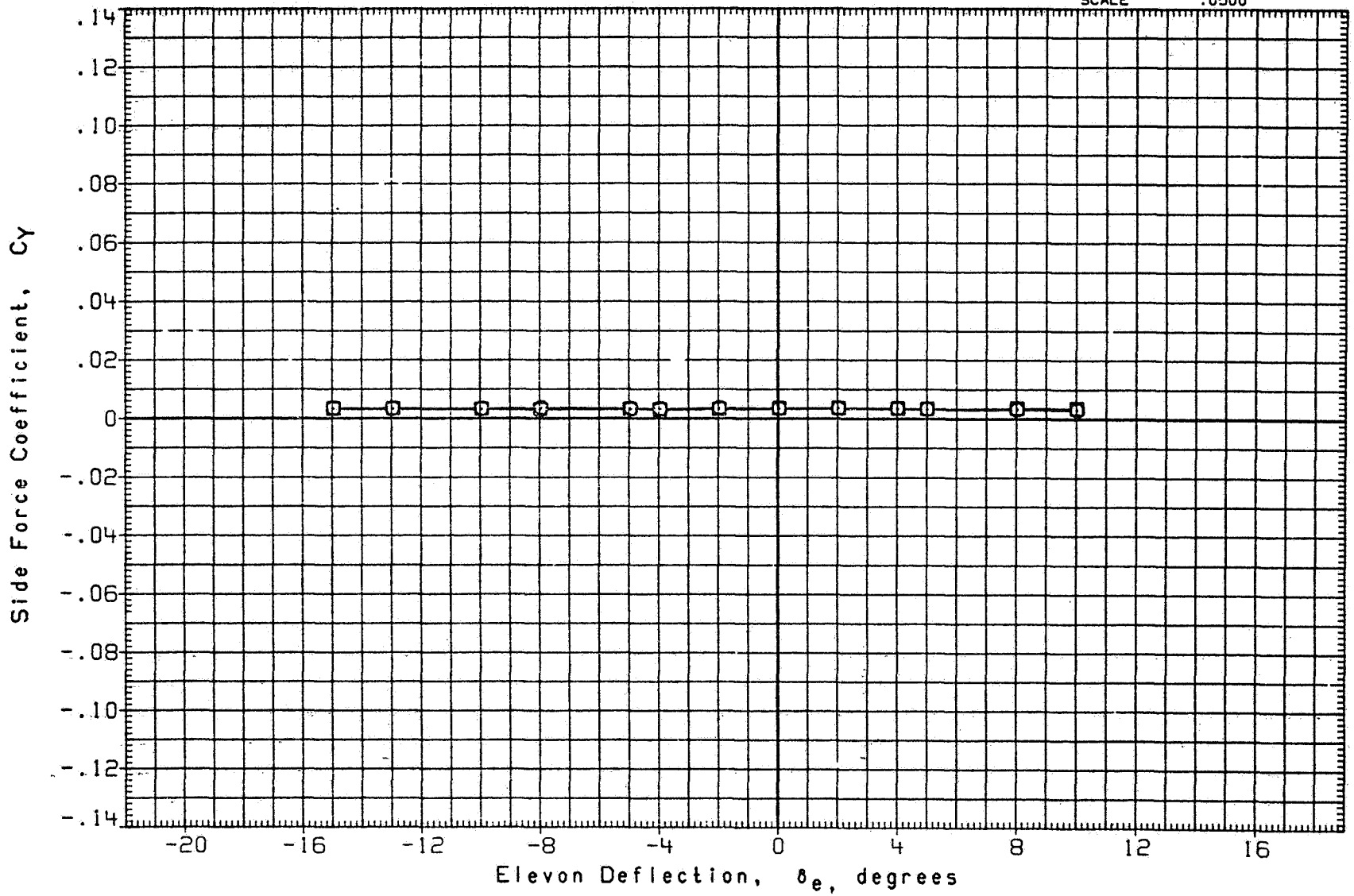


FIG.41 FULL-SPAN AILERON EFFECTS: VARY ELEVON, ALPHA=15 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	AILRON	SPDBRK
R2H020	○	AMES 118-1-97 0A145C 01	15.000	.000	.000	55.000
R2H036	□	AMES 118-1-87 0A145C 01	15.000	.000	5.000	55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

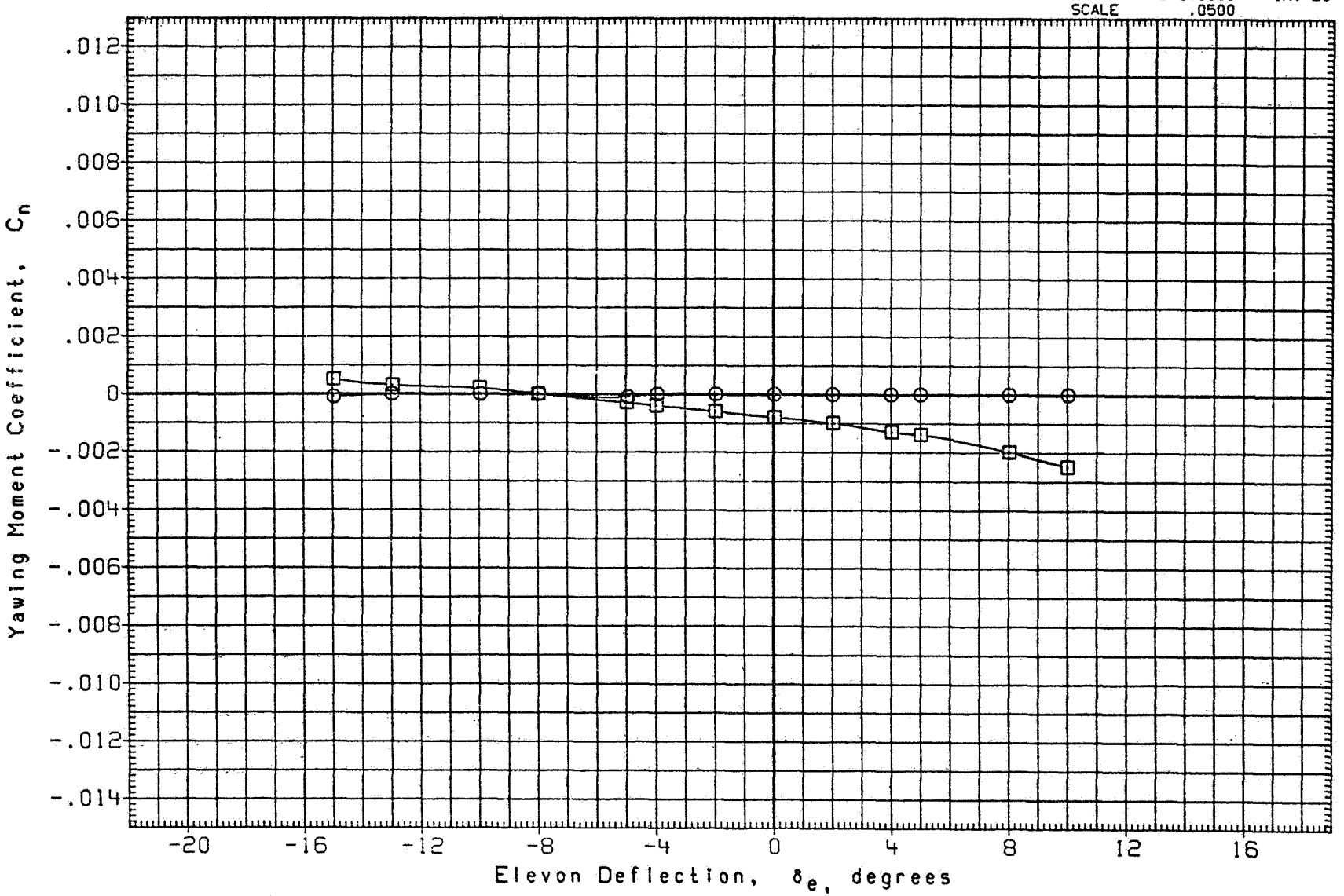


FIG.41 FULL-SPAN AILERON EFFECTS: VARY ELEVON, ALPHA=15 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	AILRON	SPDBRK
R2H020	○	AMES 118-1-87 0A145C 01	15.000	.000	.000	55.000
R2H036	□	AMES 118-1-87 0A145C 01	15.000	.000	5.000	55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

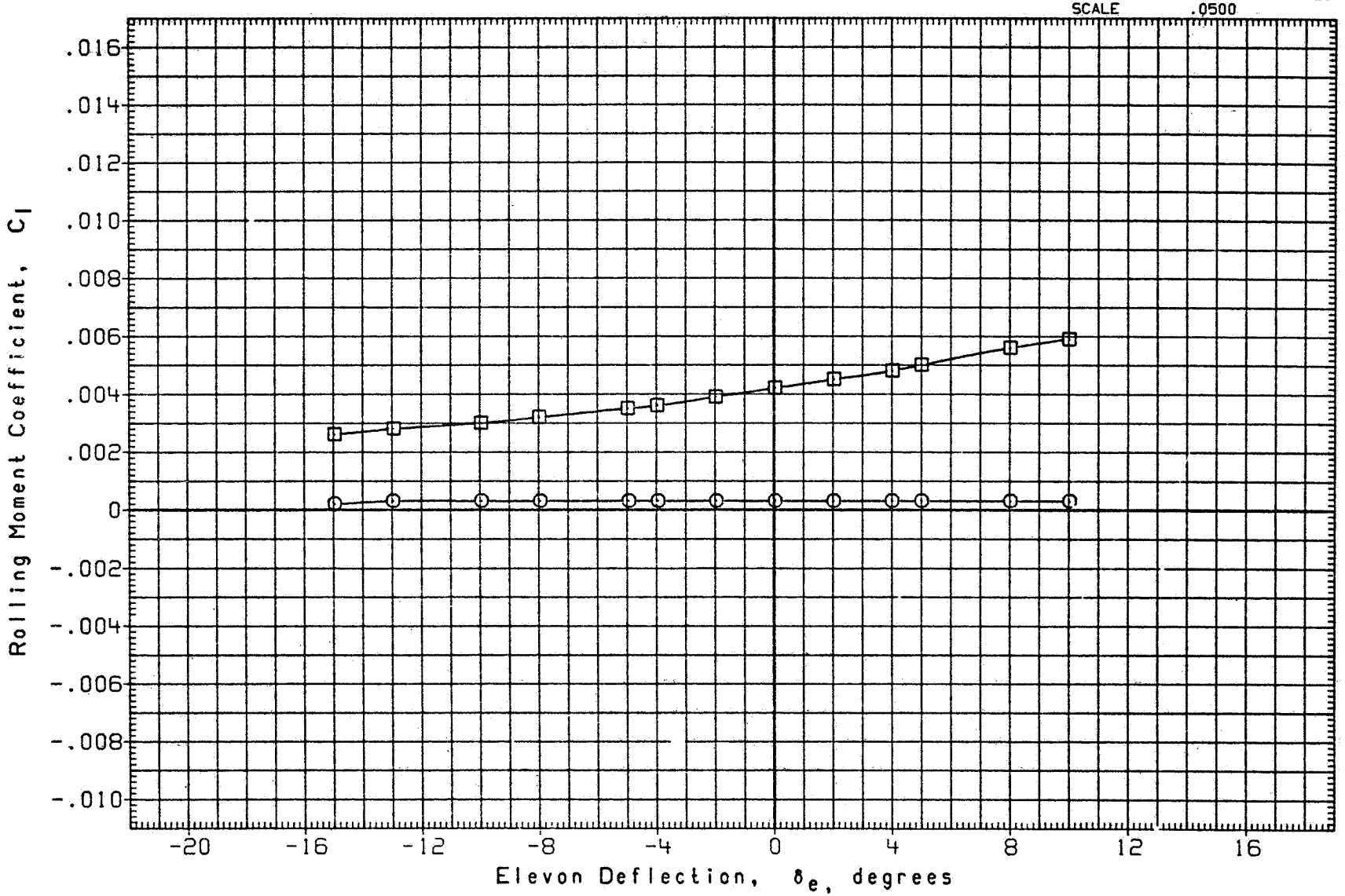


FIG.41 FULL-SPAN AILERON EFFECTS: VARY ELEVON, ALPHA=15 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	AILRON	SPDBRK
R2H021	○	AMES 118-1-87 0A145C 01	20.000	.000	.000	55.000
R2H037	□	AMES 118-1-87 0A145C 01	20.000	.000	5.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

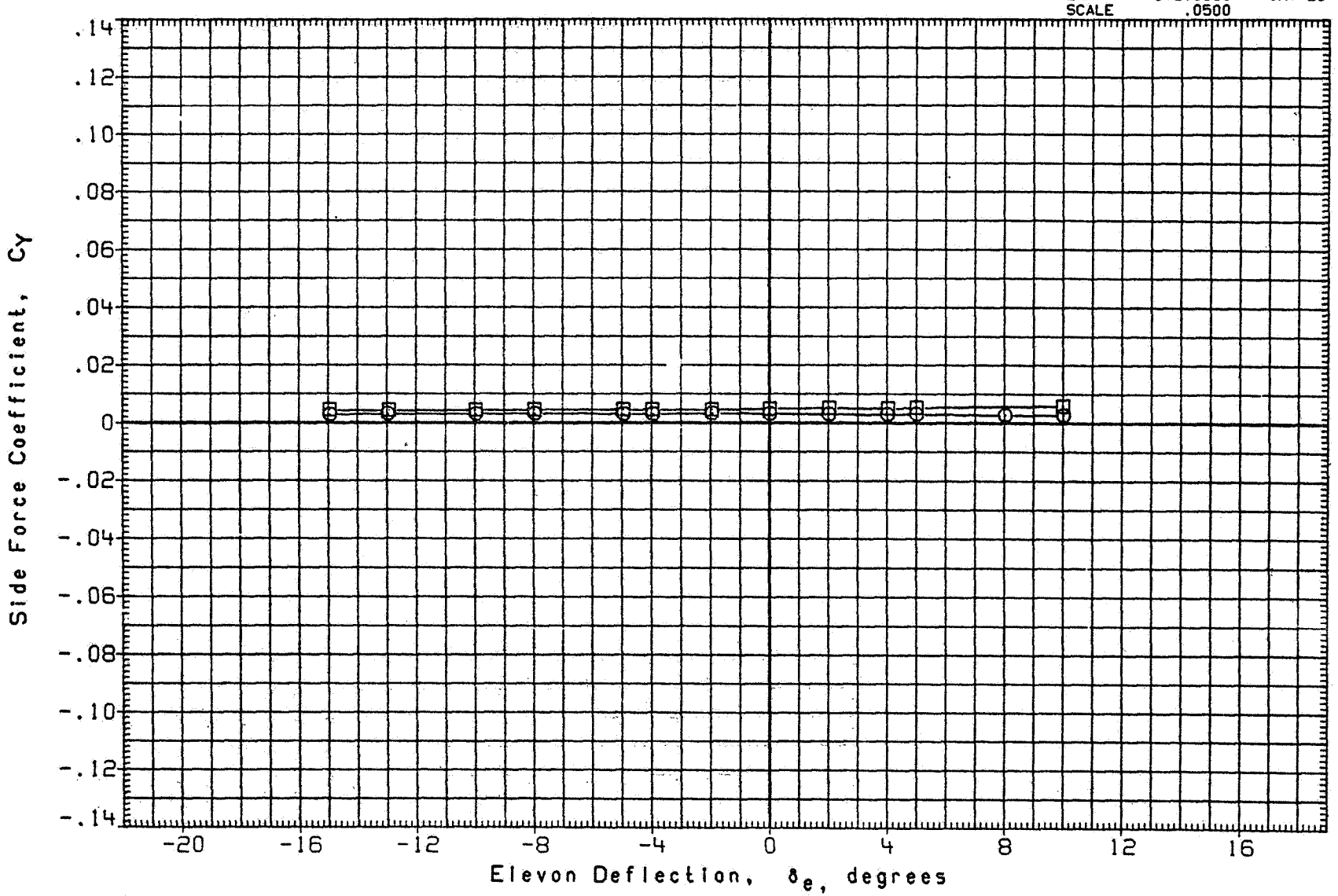


FIG.42 FULL-SPAN AILERON EFFECTS: VARY ELEVON, ALPHA=20 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	AILRON	SPDBRK
R2H021	○	AMES 118-1-87 0A145C 01	20.000	.000	.000	55.000
R2H037	□	AMES 118-1-87 0A145C 01	20.000	.000	5.000	55.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

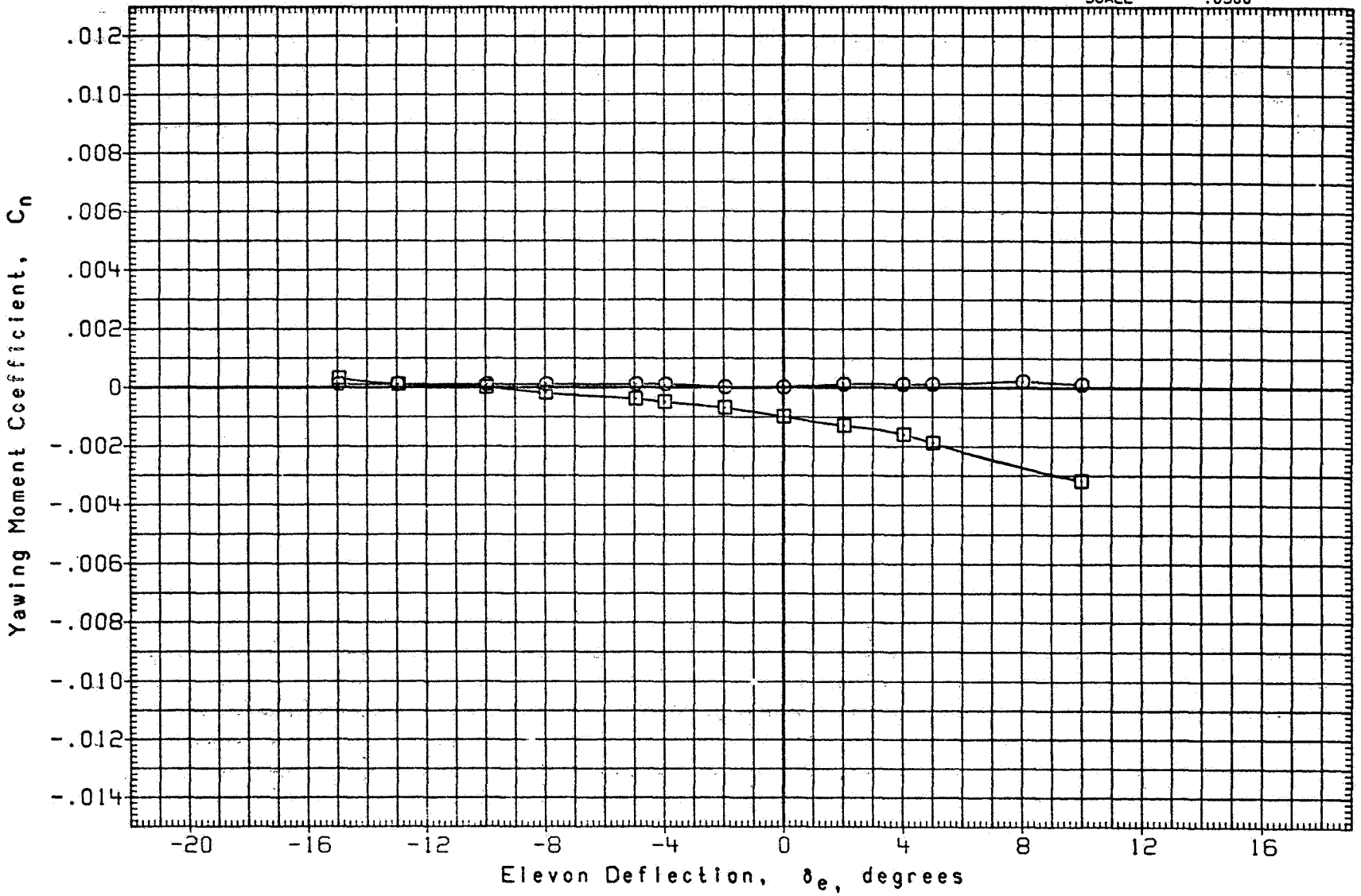


FIG.42 FULL-SPAN AILERON EFFECTS: VARY ELEVON, ALPHA=20 DEG, BETA=0 DEG

(A)MACH = 3.00

DATA SET	SYMBOL	CONFIGURATION	ALPHA	BETA	AILRON	SPOBRK
R2H021	○	AMES 118-1-87 OA145C 01	20.000	.000	.000	55.000
R2H037	□	AMES 118-1-87 OA145C 01	20.000	.000	5.000	55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	INCHES
BREF	936.6800	INCHES
XMRP	1076.6800	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0500	

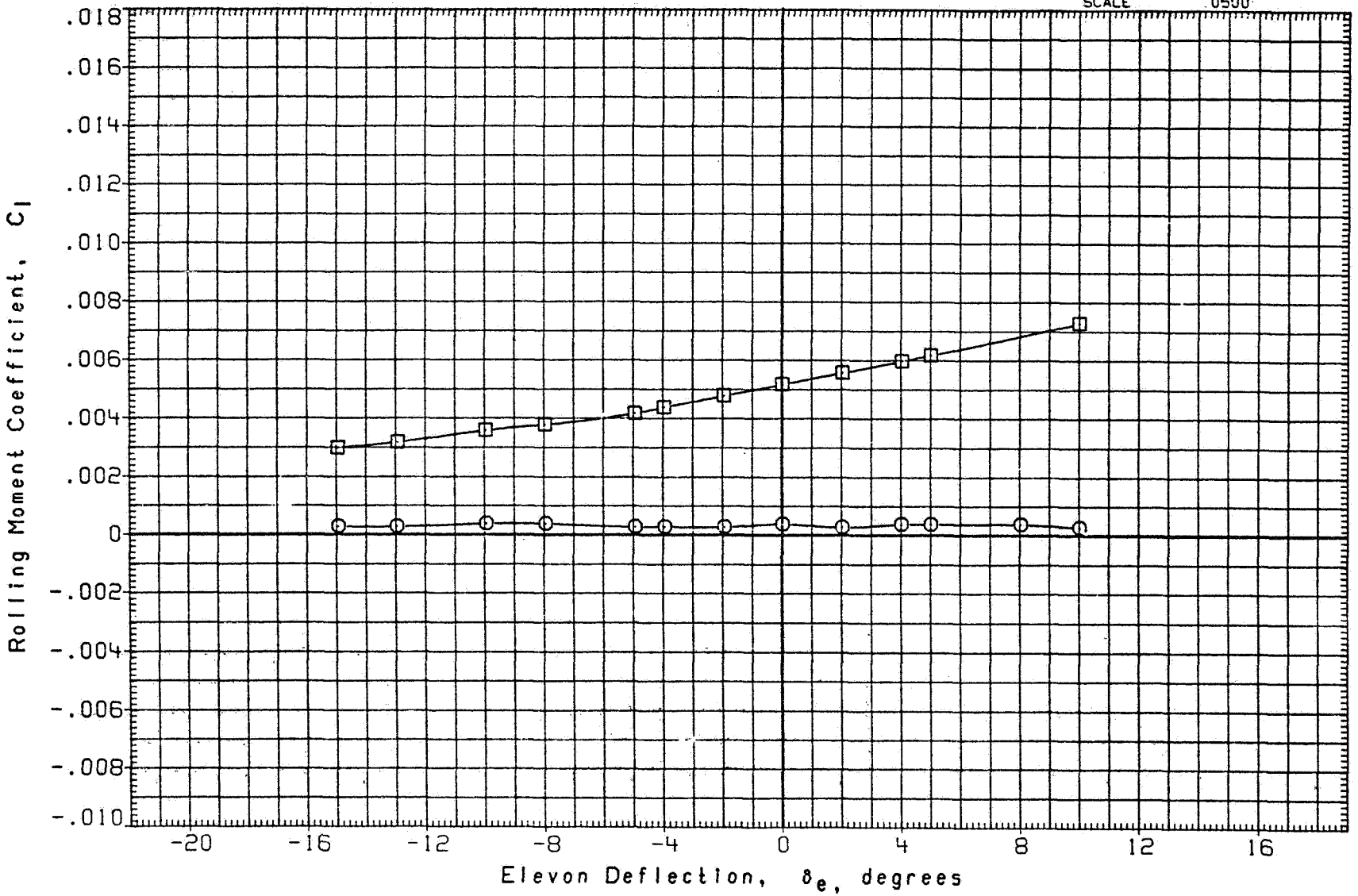


FIG.42 FULL-SPAN AILERON EFFECTS: VARY ELEVON, ALPHA=20 DEG, BETA=0 DEG

(A)MACH = 3.00

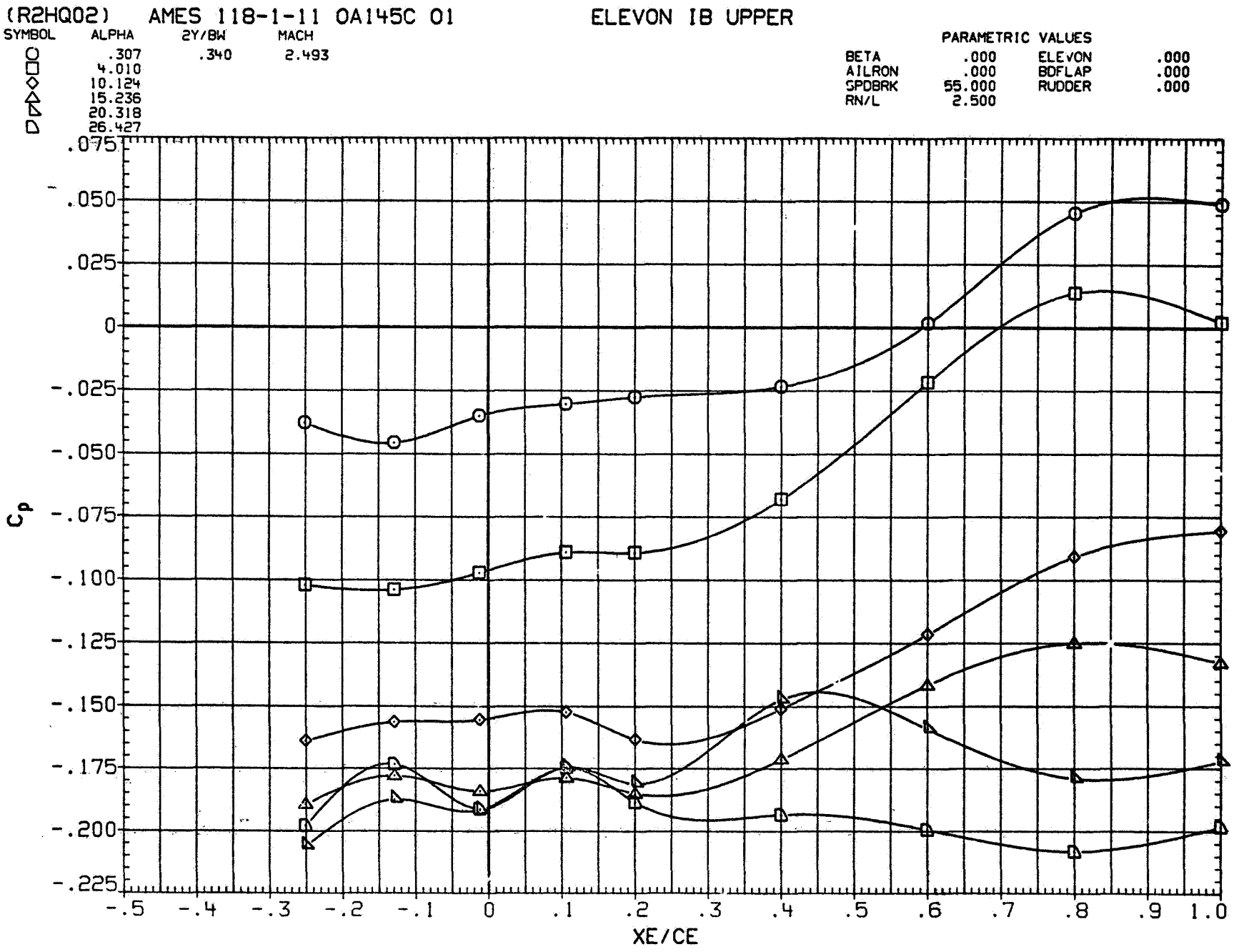


FIG.43 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

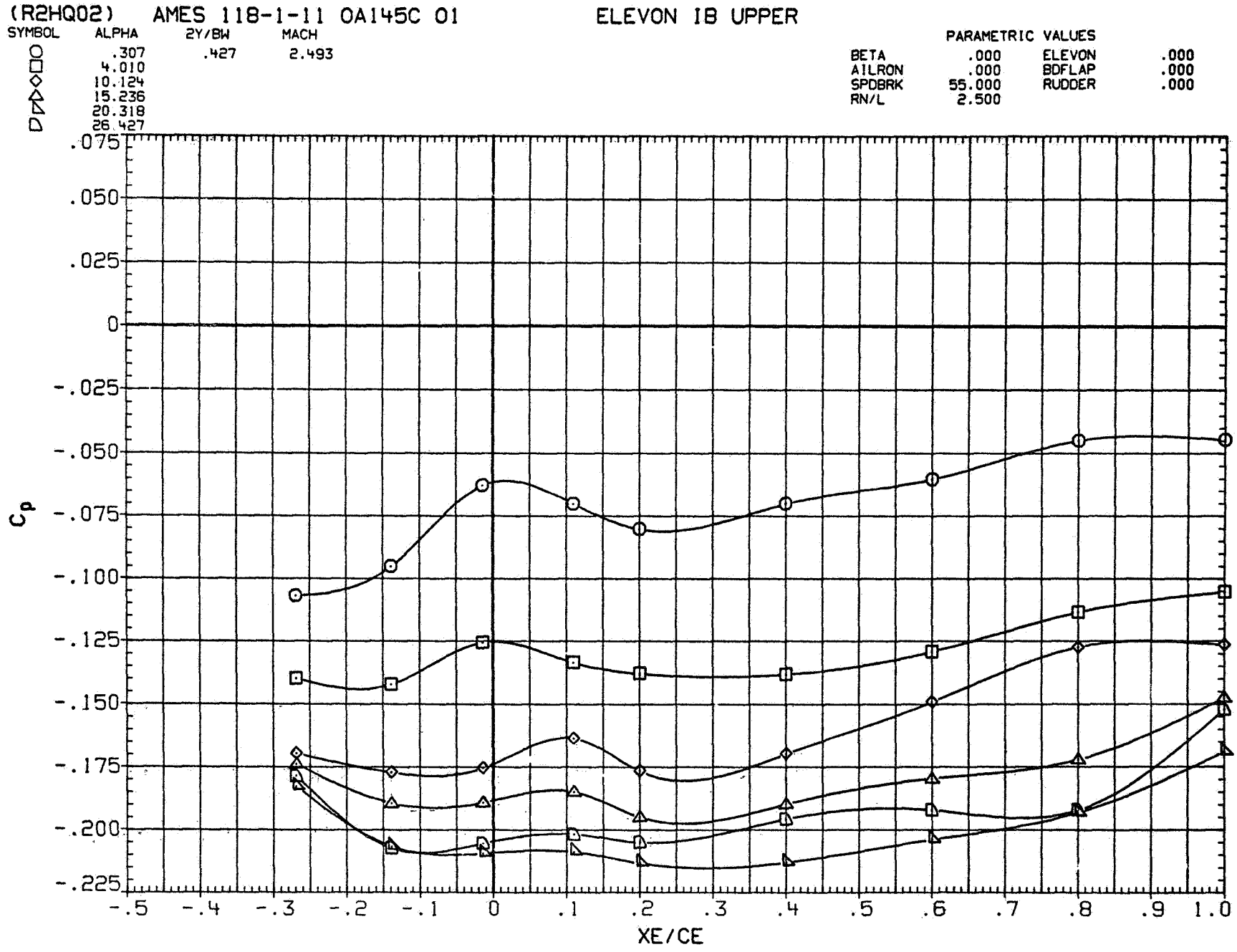


FIG.43 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

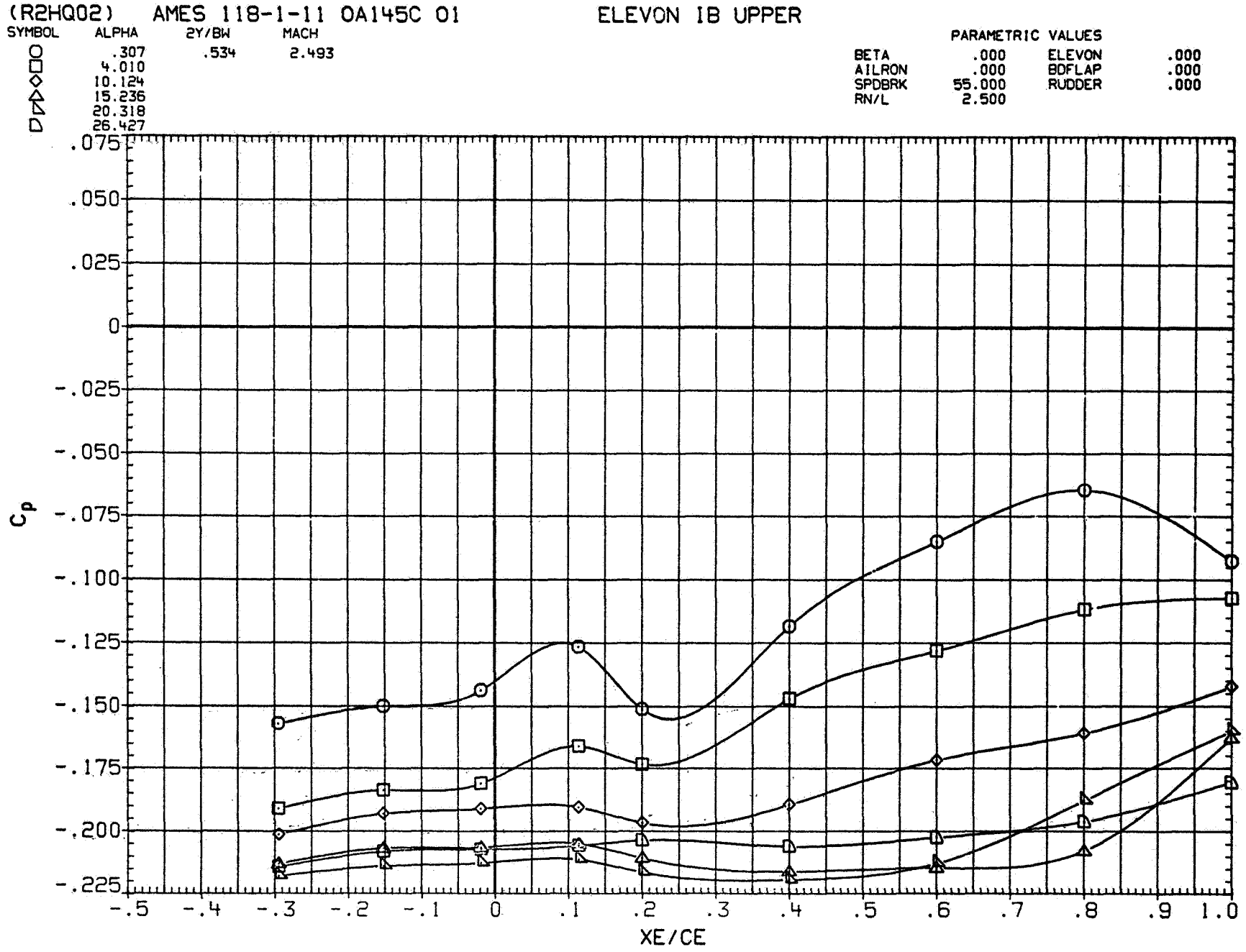


FIG.43 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

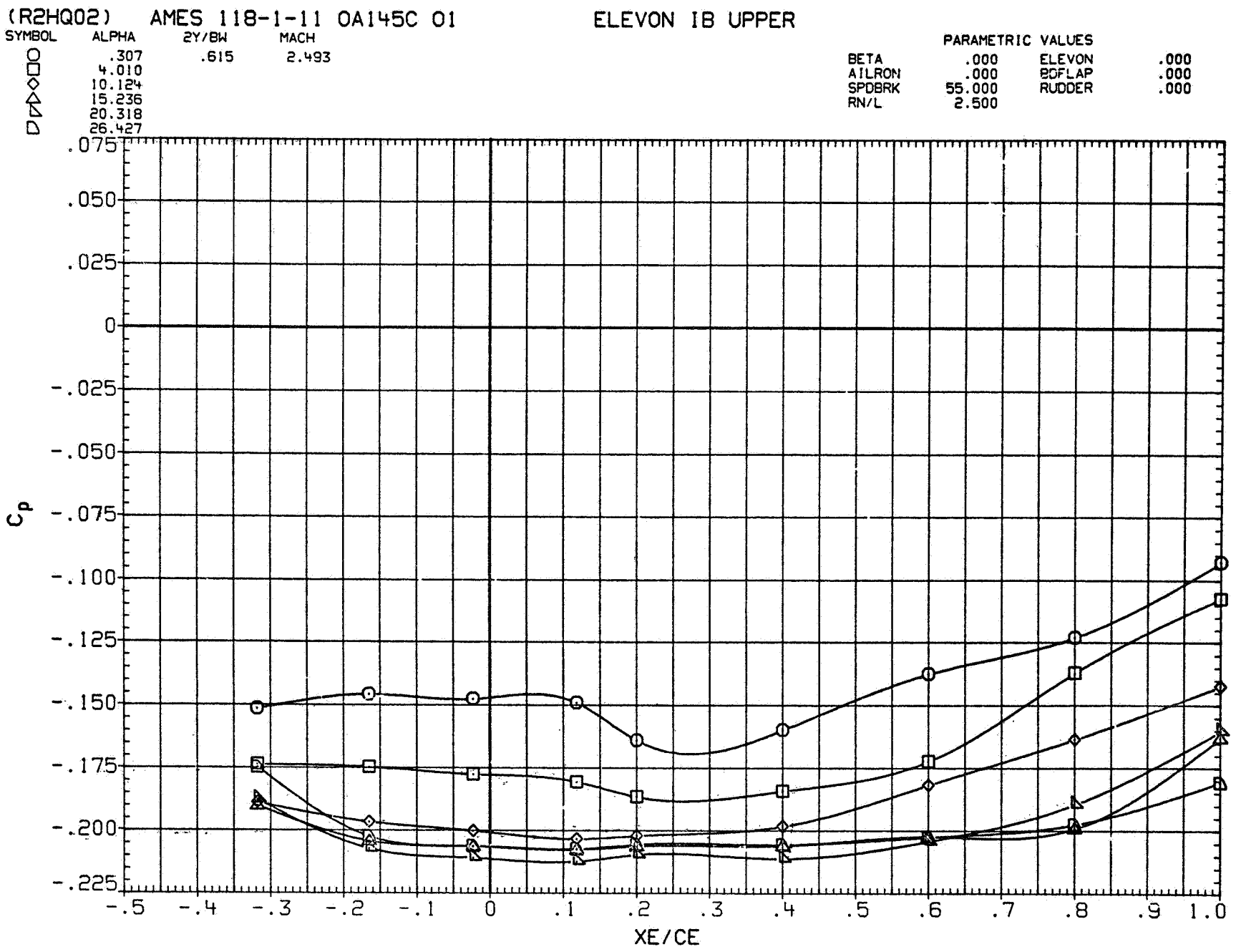


FIG.43 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

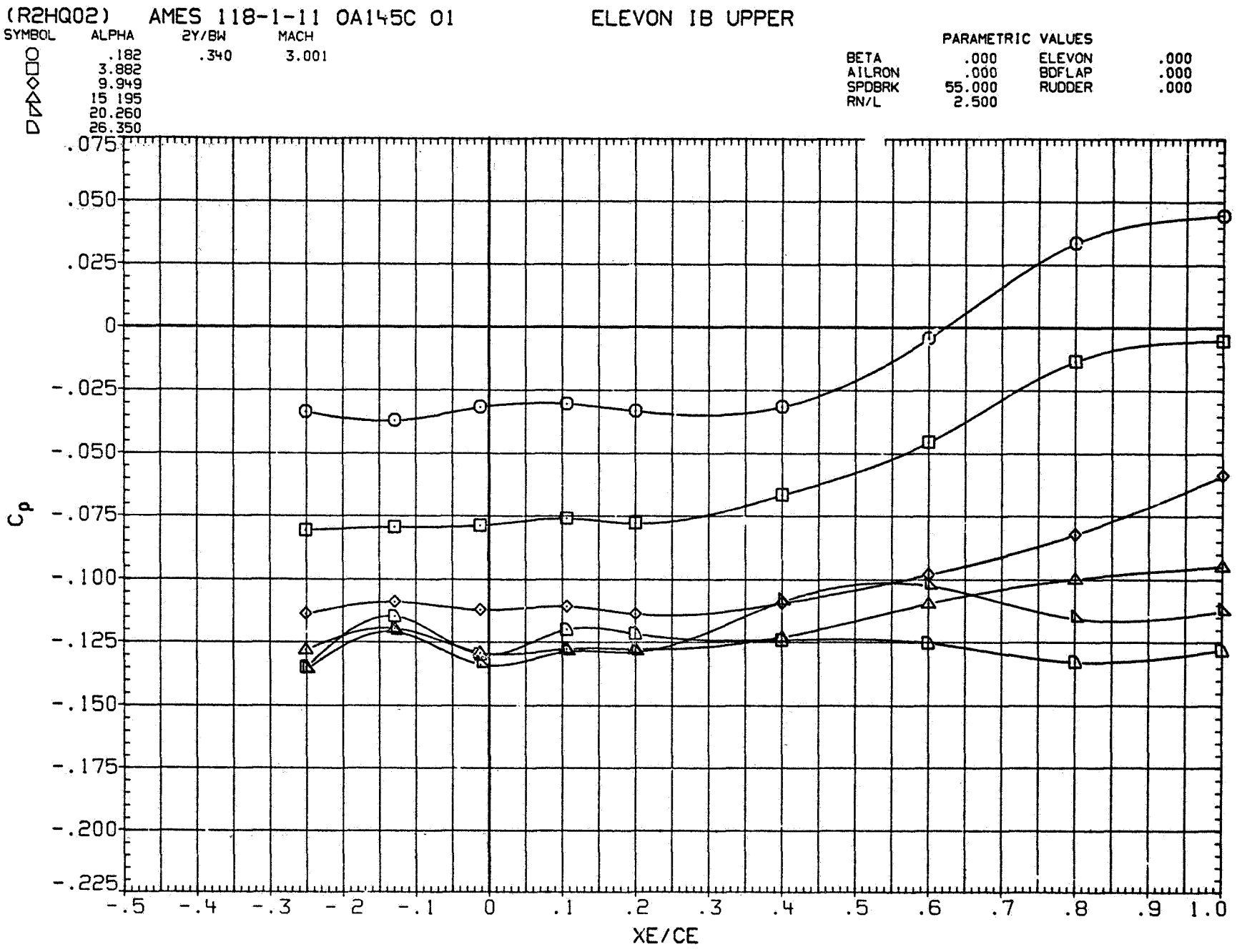


FIG.43 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

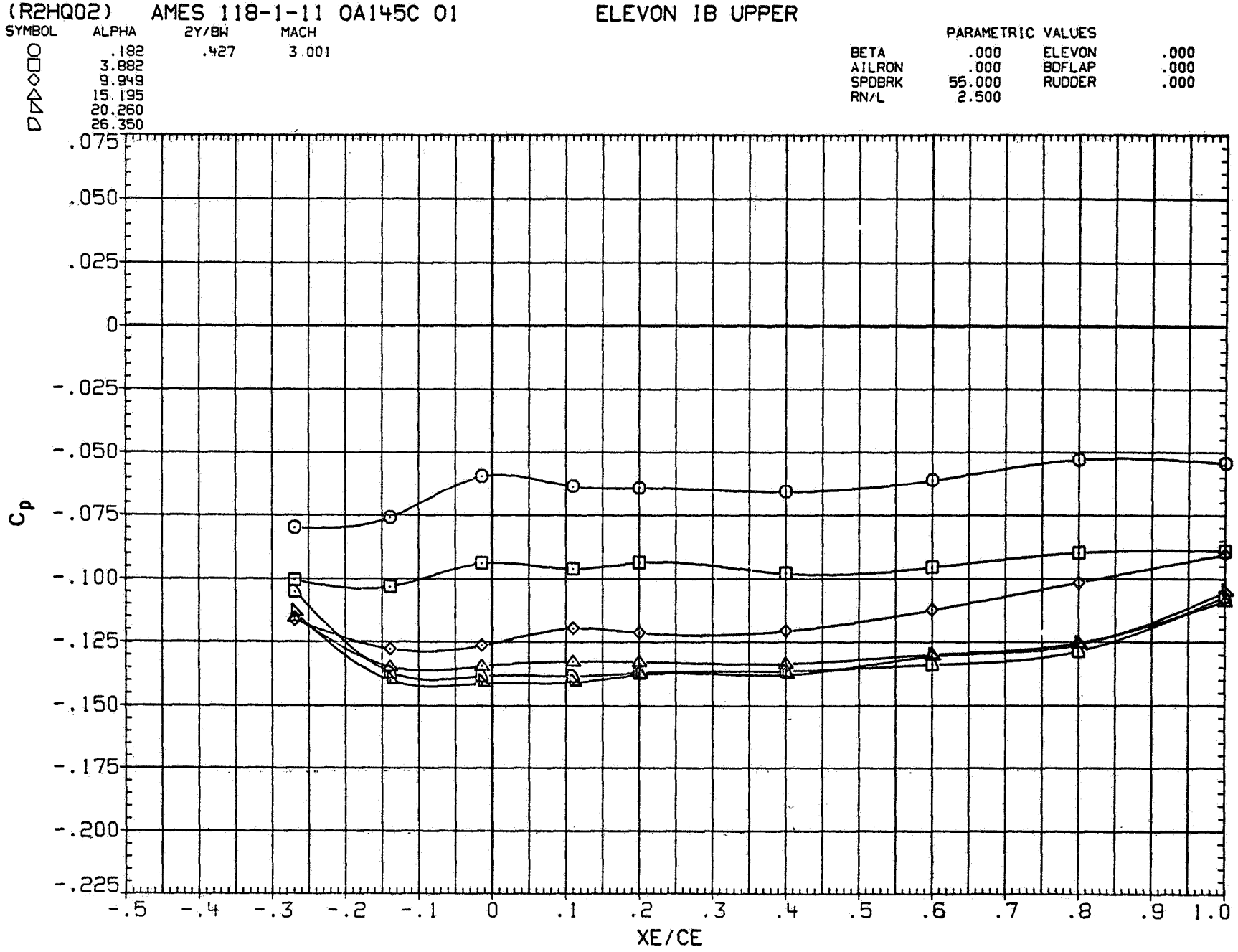


FIG.43 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HQ02) AMES 118-1-11 0A145C 01 ELEVON IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	182	.534	3.001
□	3.882		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

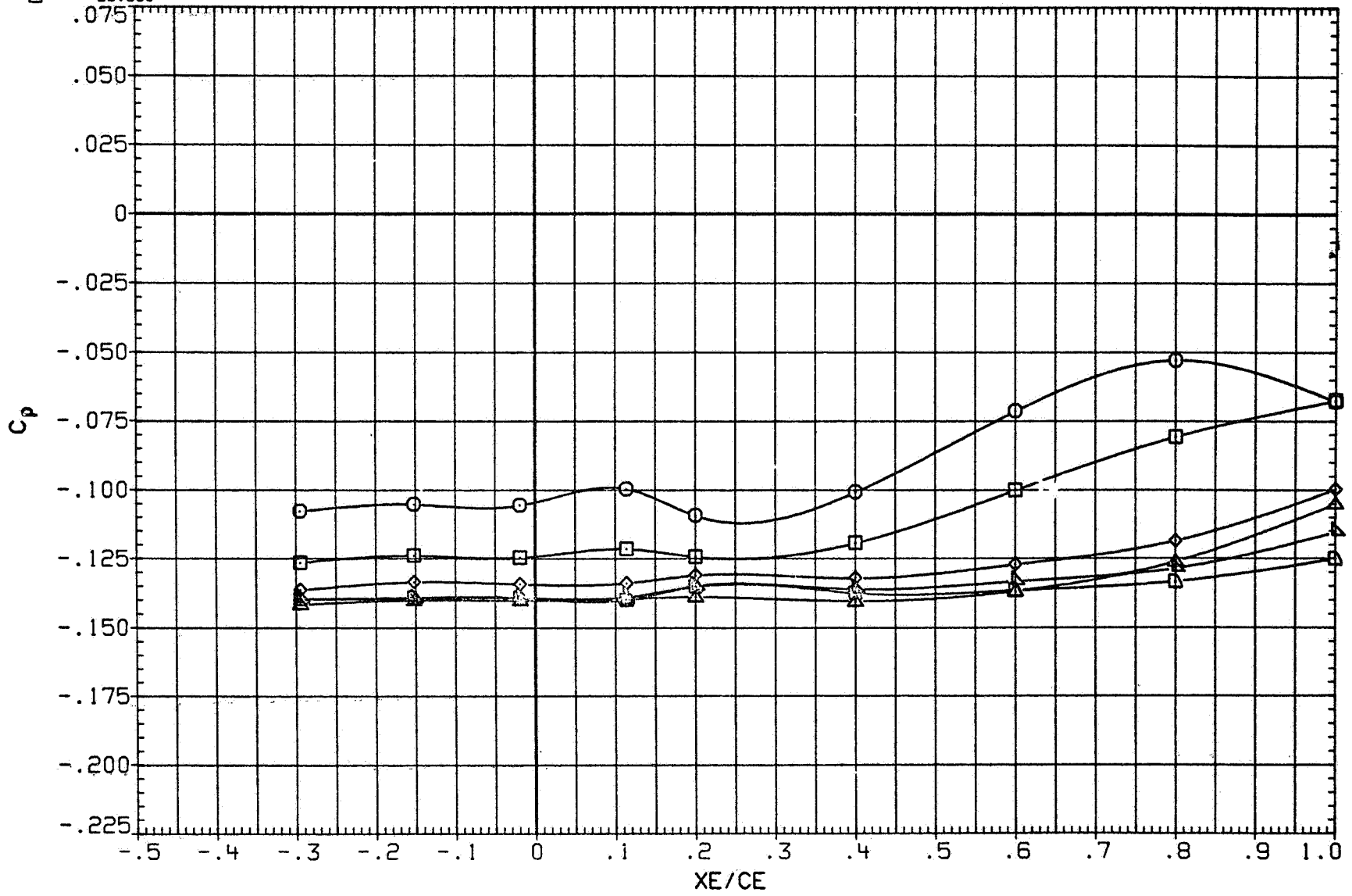


FIG.43 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

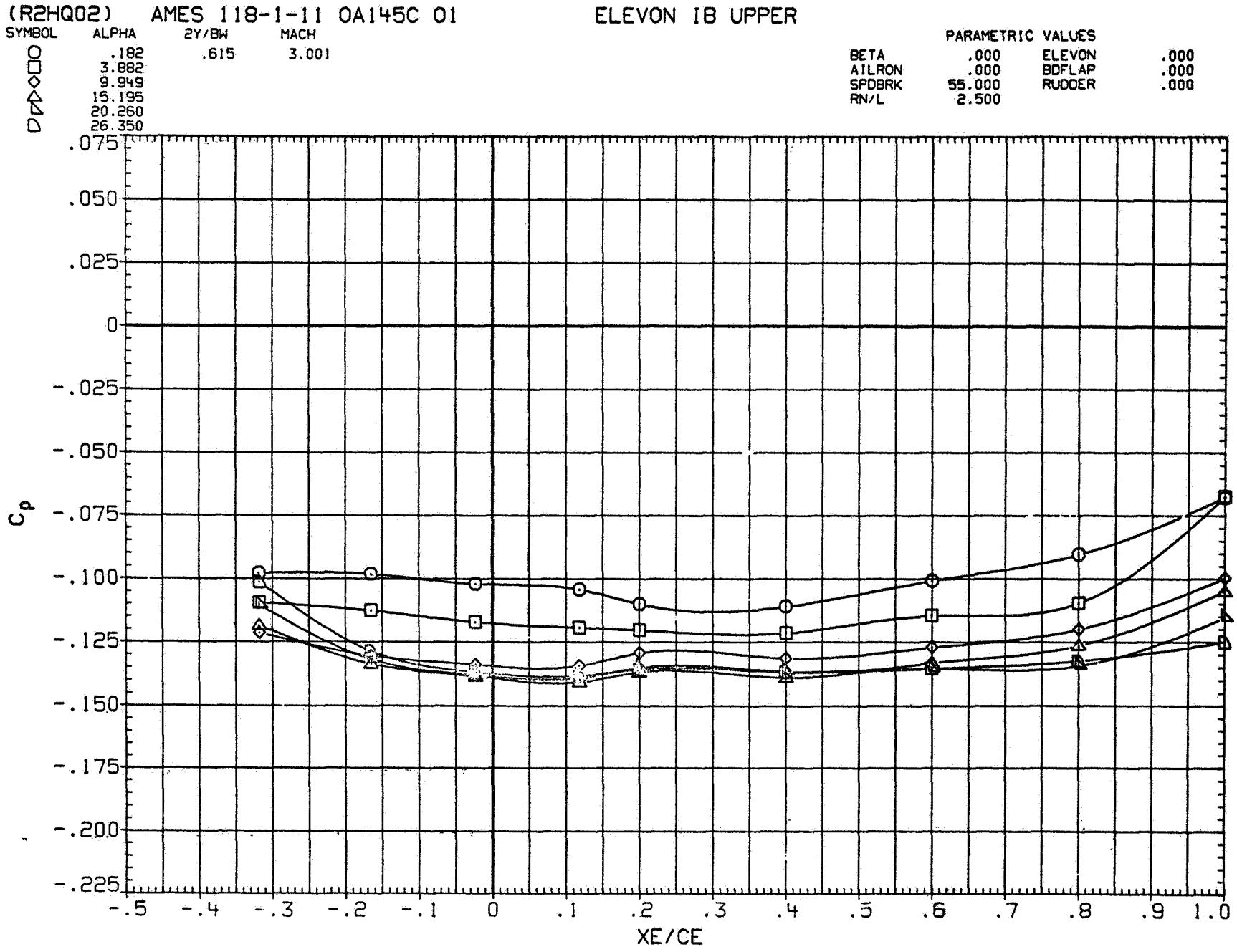


FIG.43 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HQ02) AMES 118-1-11 OA145C 01 ELEVON IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
O	.020	.340	3.498
□	4.642		
◇	9.674		
△	14.765		
◁	19.824		
D	25.034		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

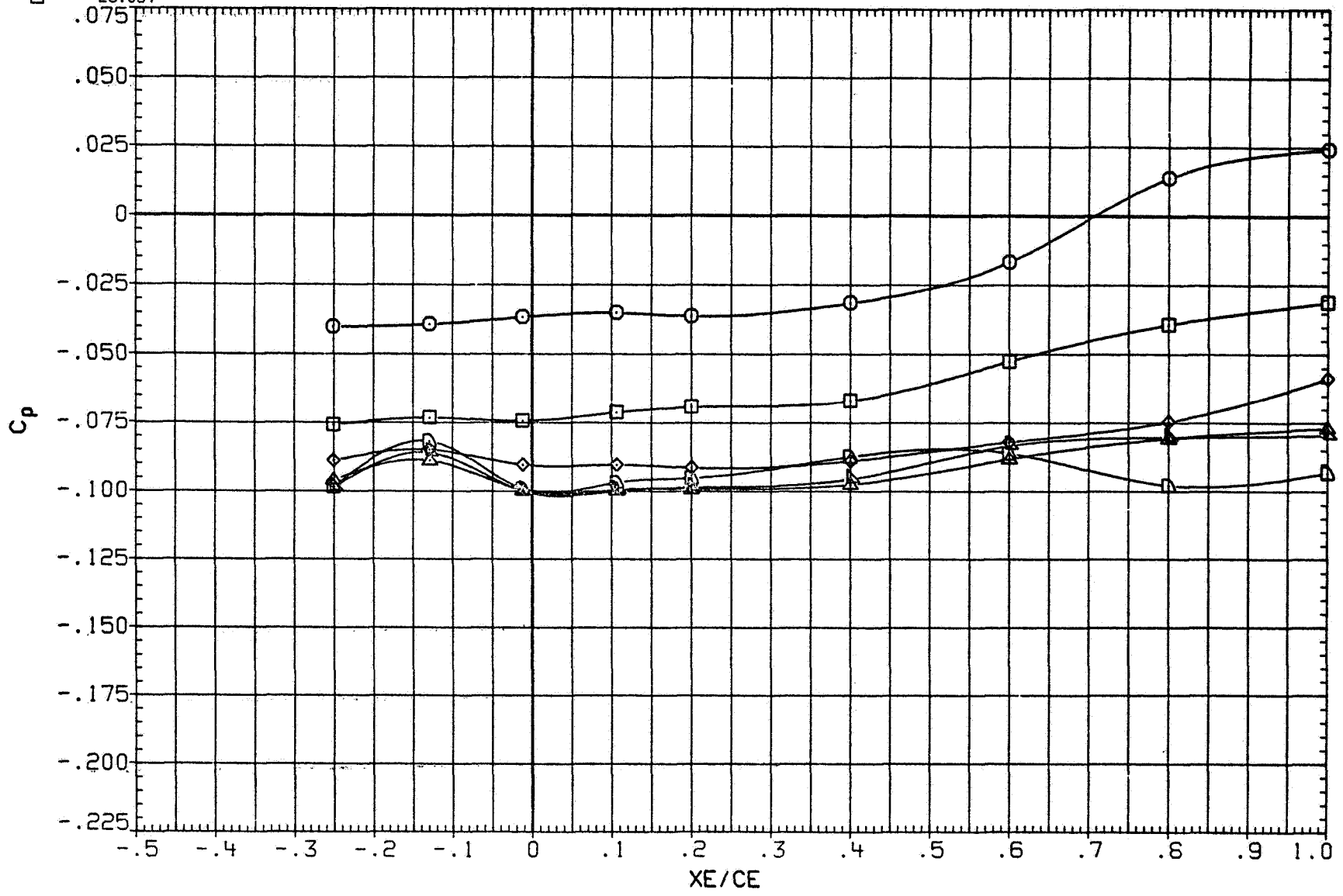


FIG.43 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

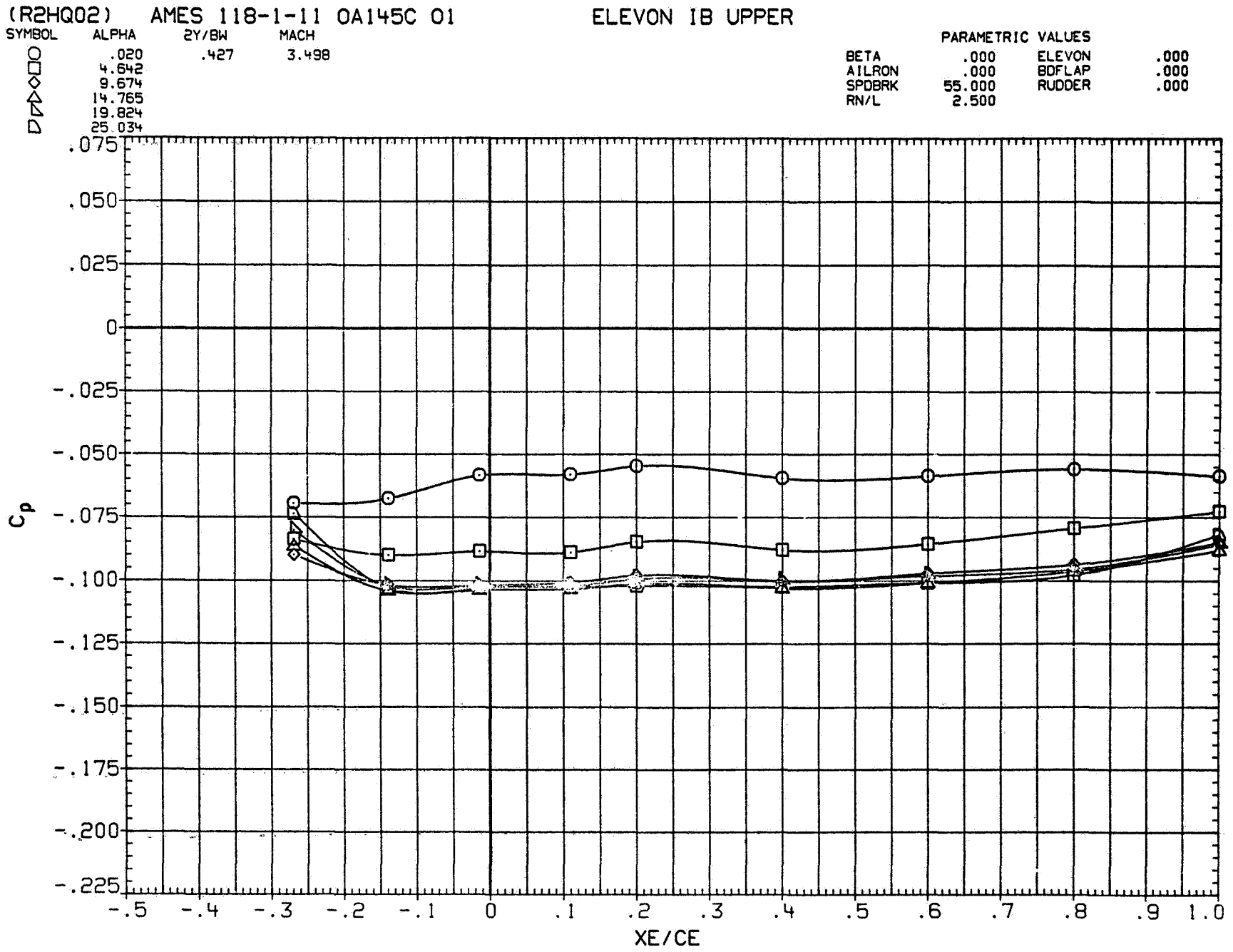


FIG.43 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

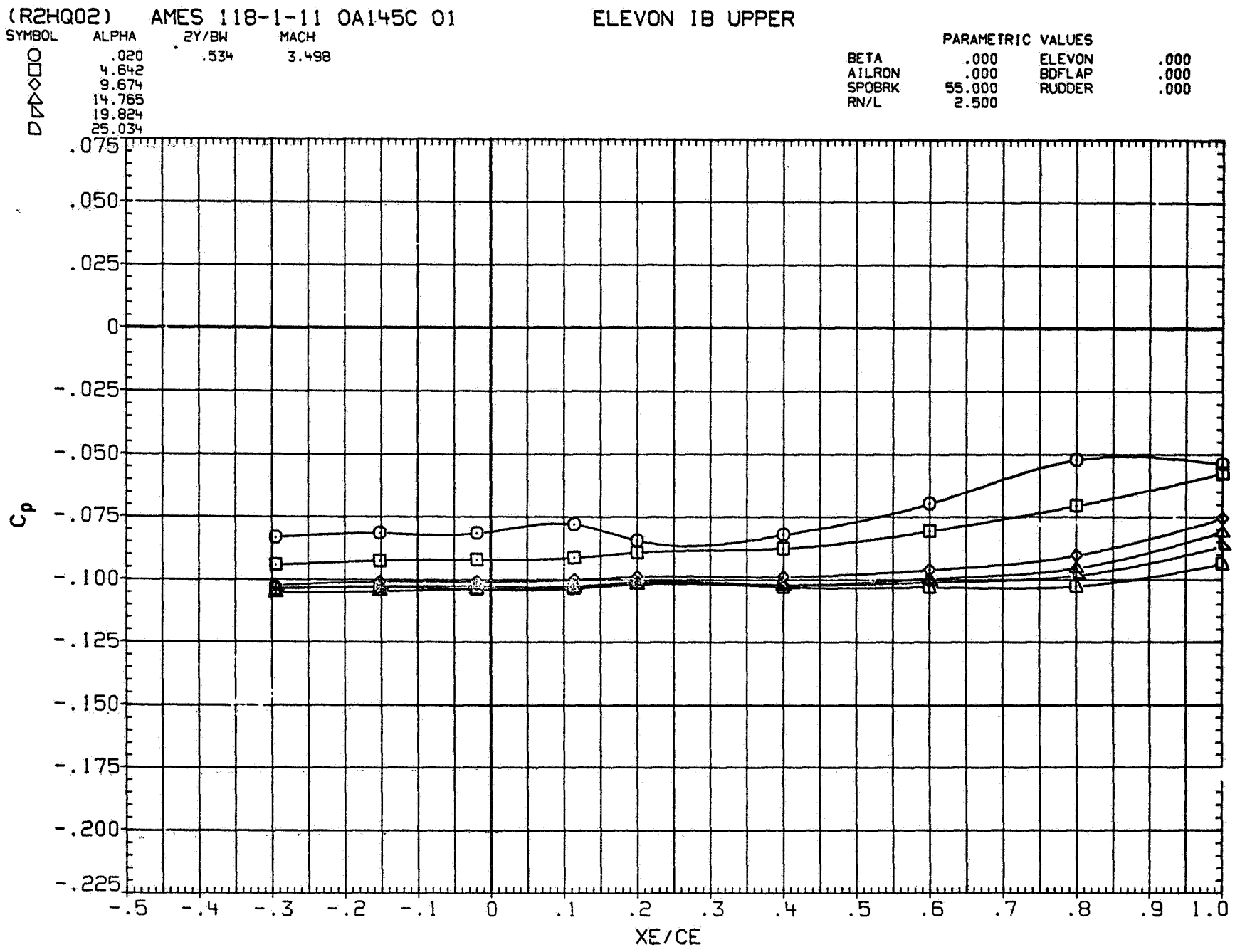


FIG.43 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

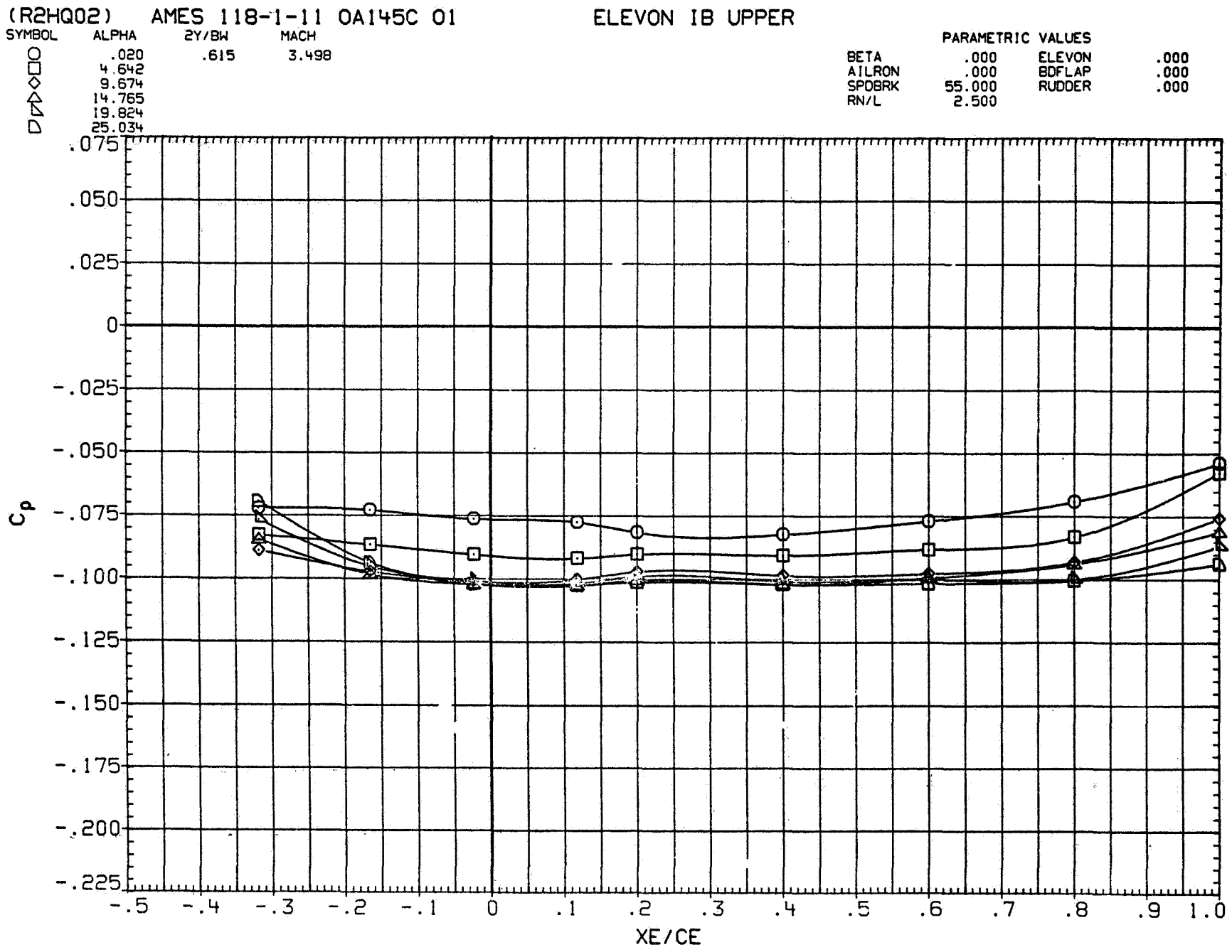


FIG.43 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

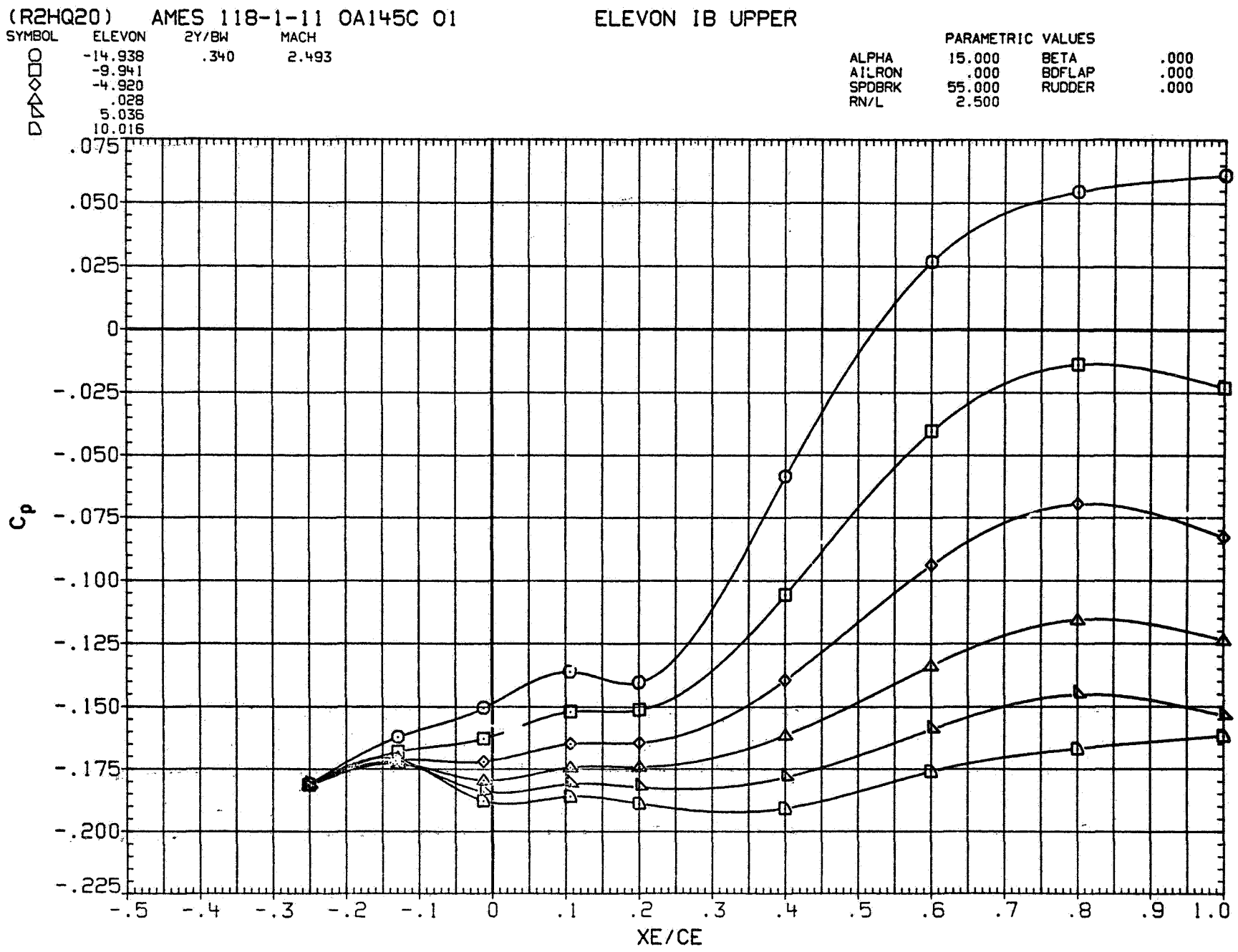


FIG.44 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

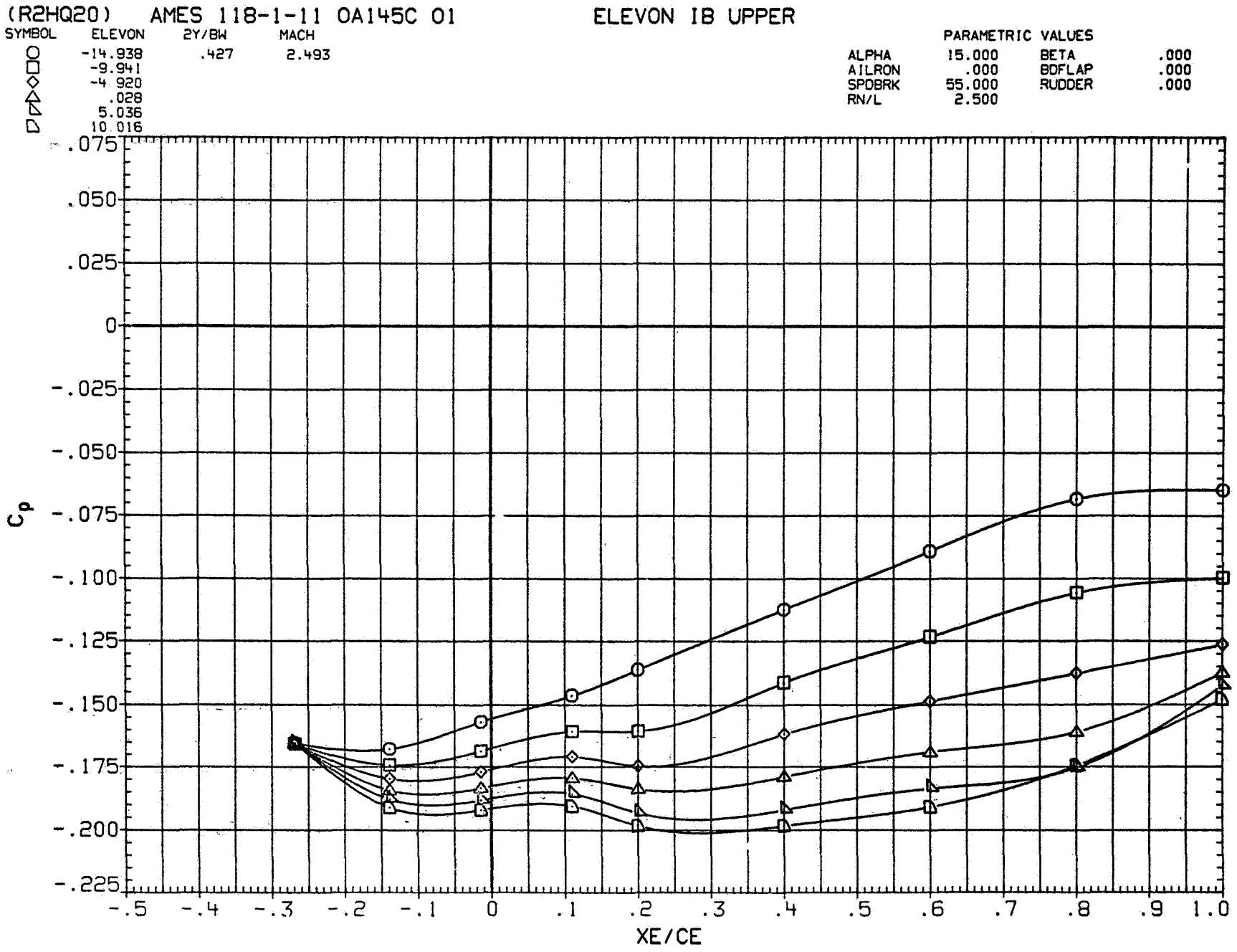


FIG.44 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

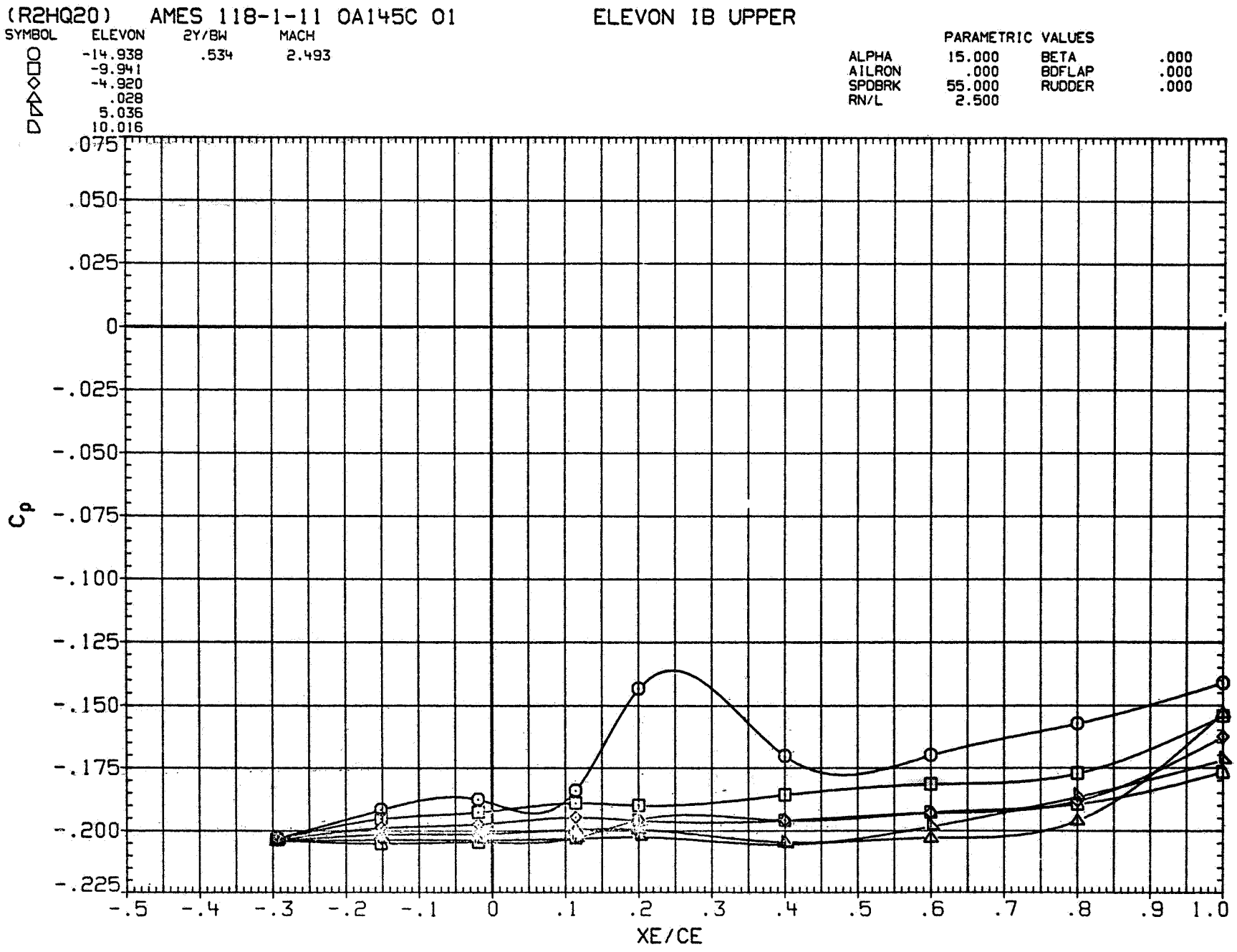


FIG.44 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

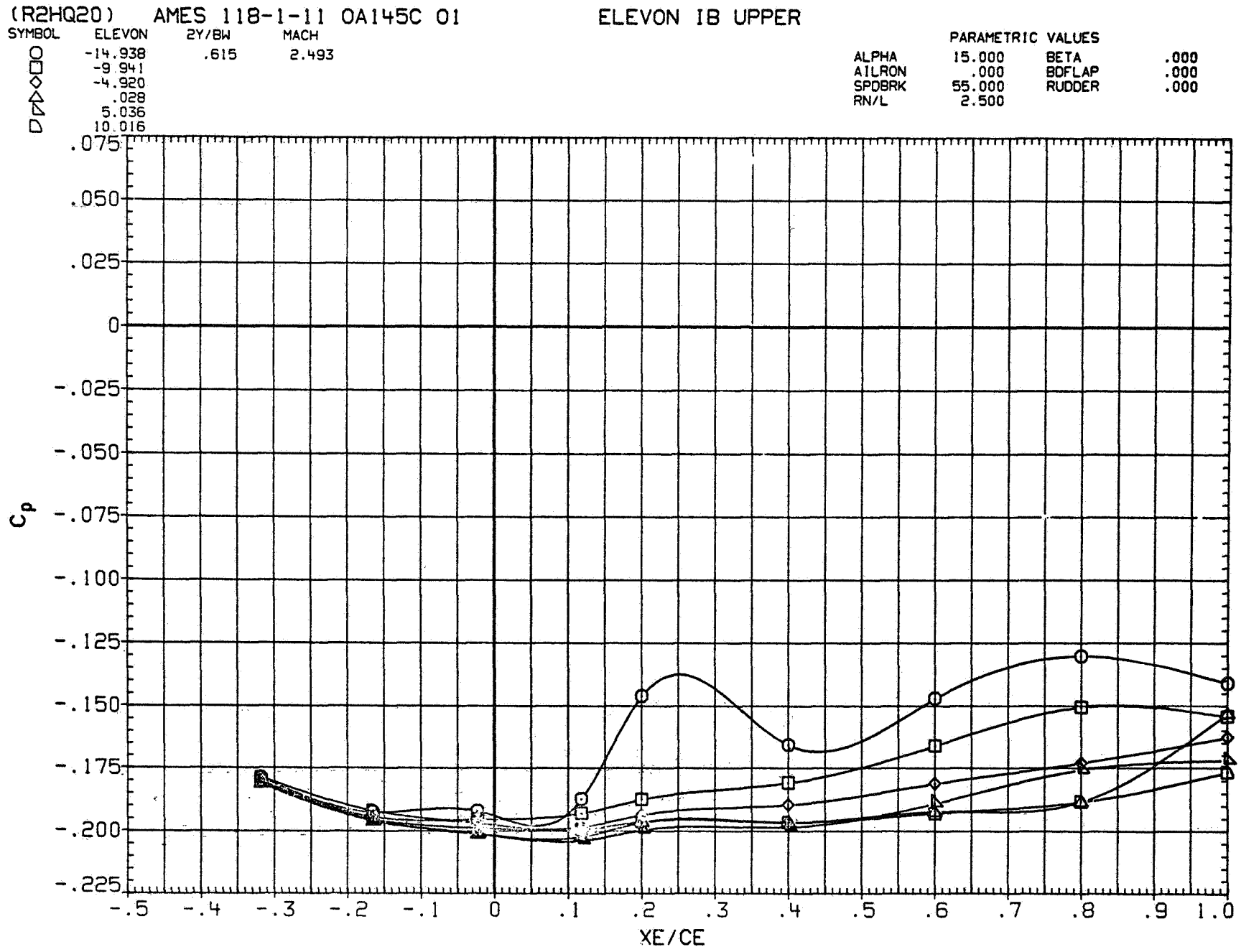


FIG.44 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

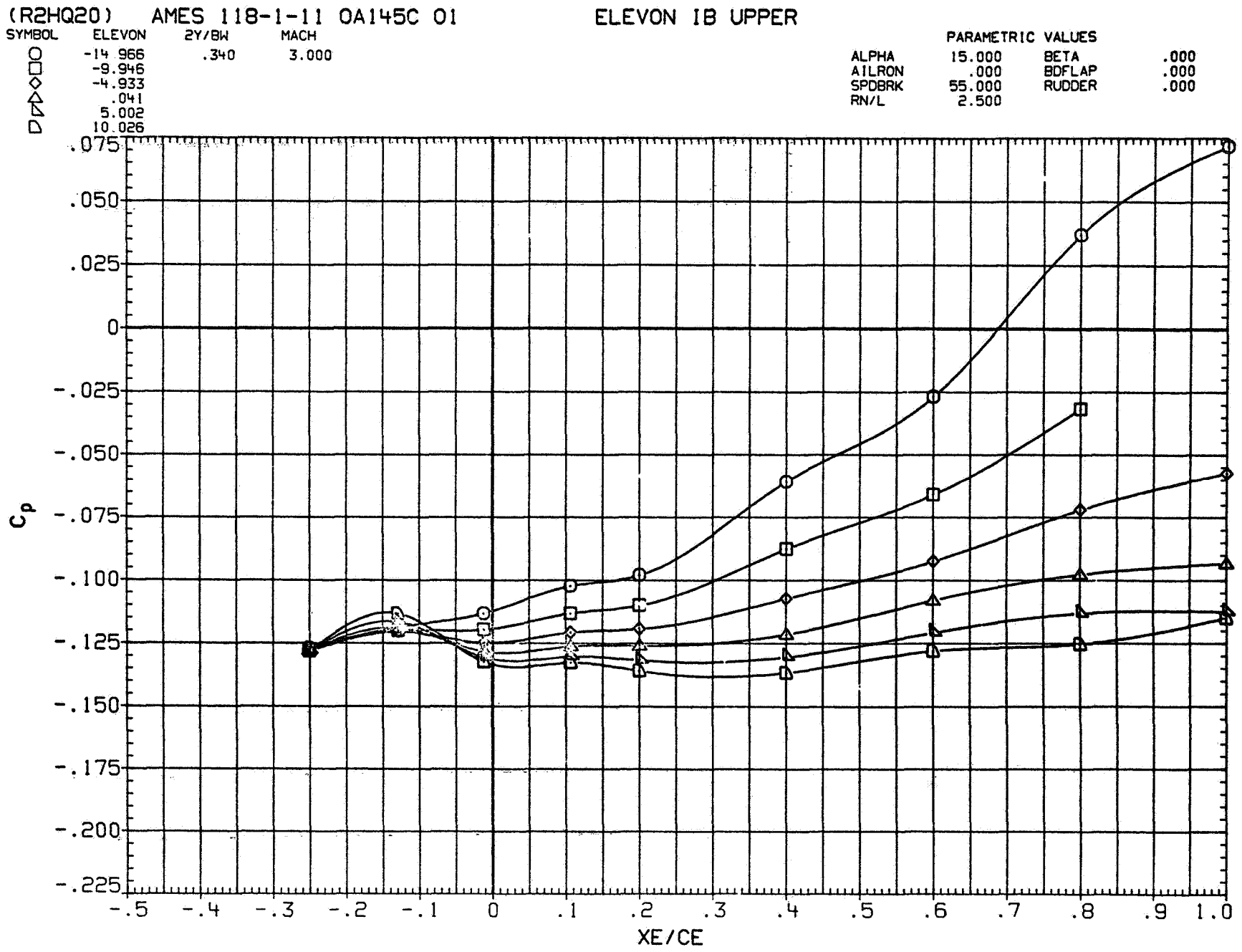


FIG.44 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

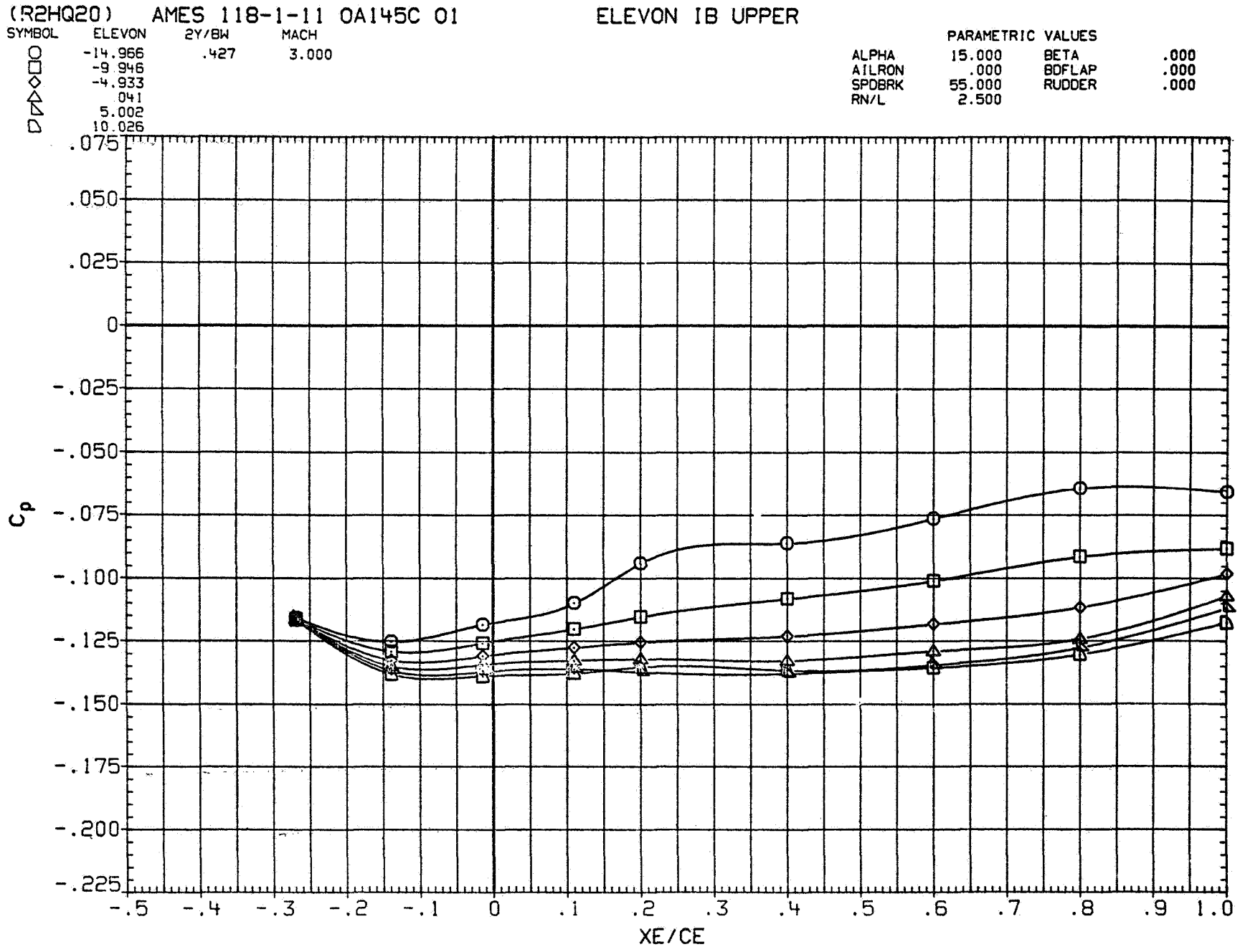


FIG.44 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

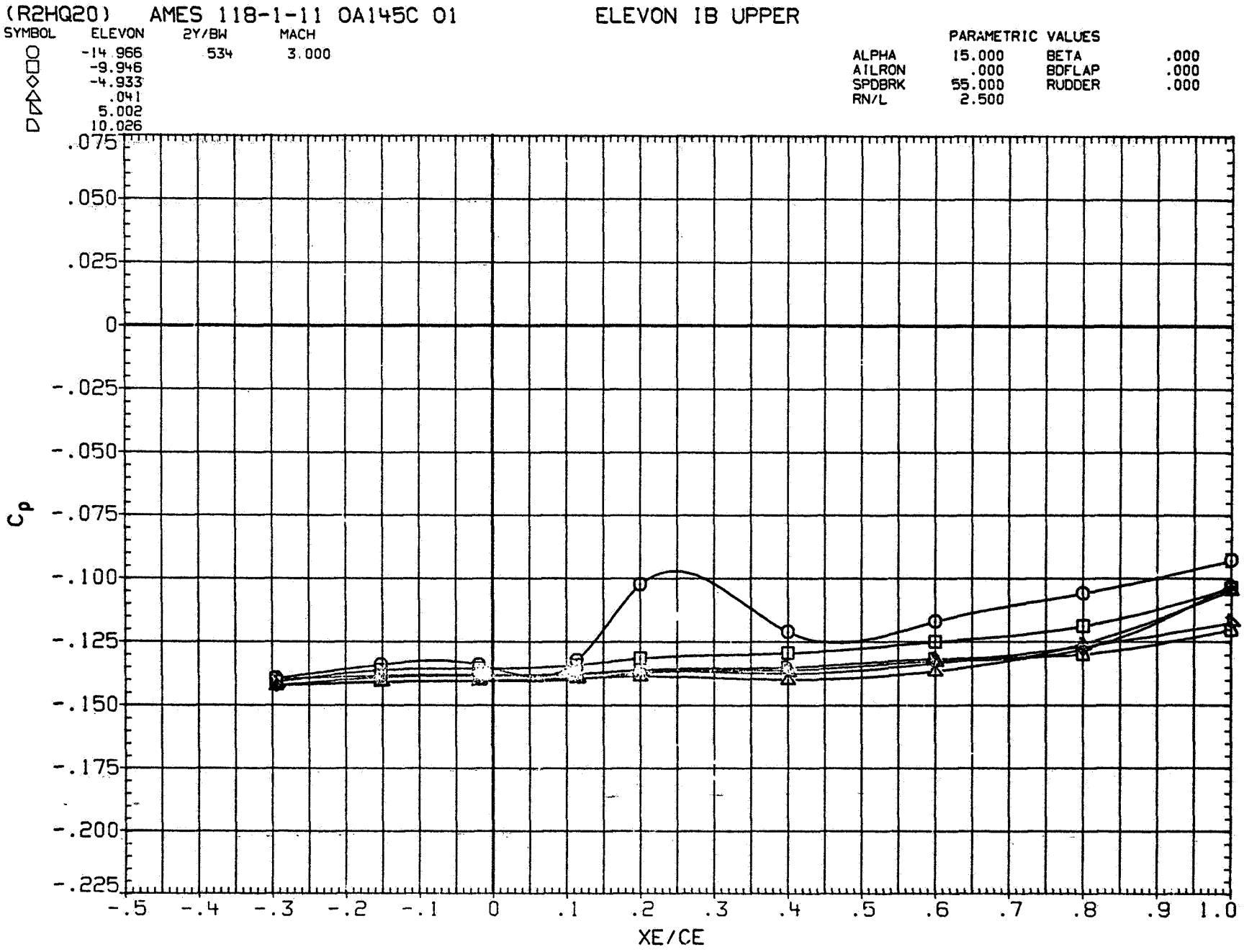


FIG.44 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

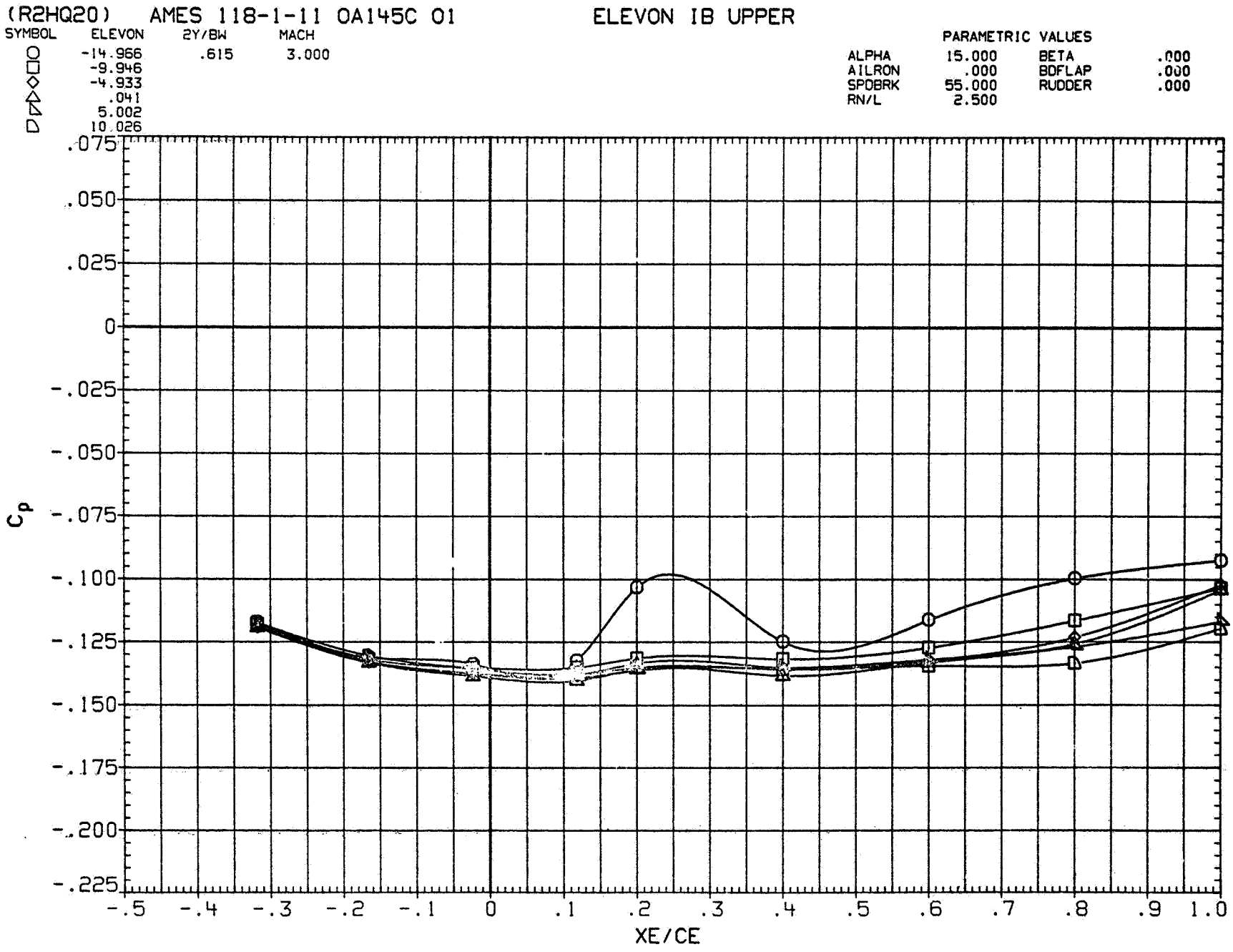


FIG.44 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

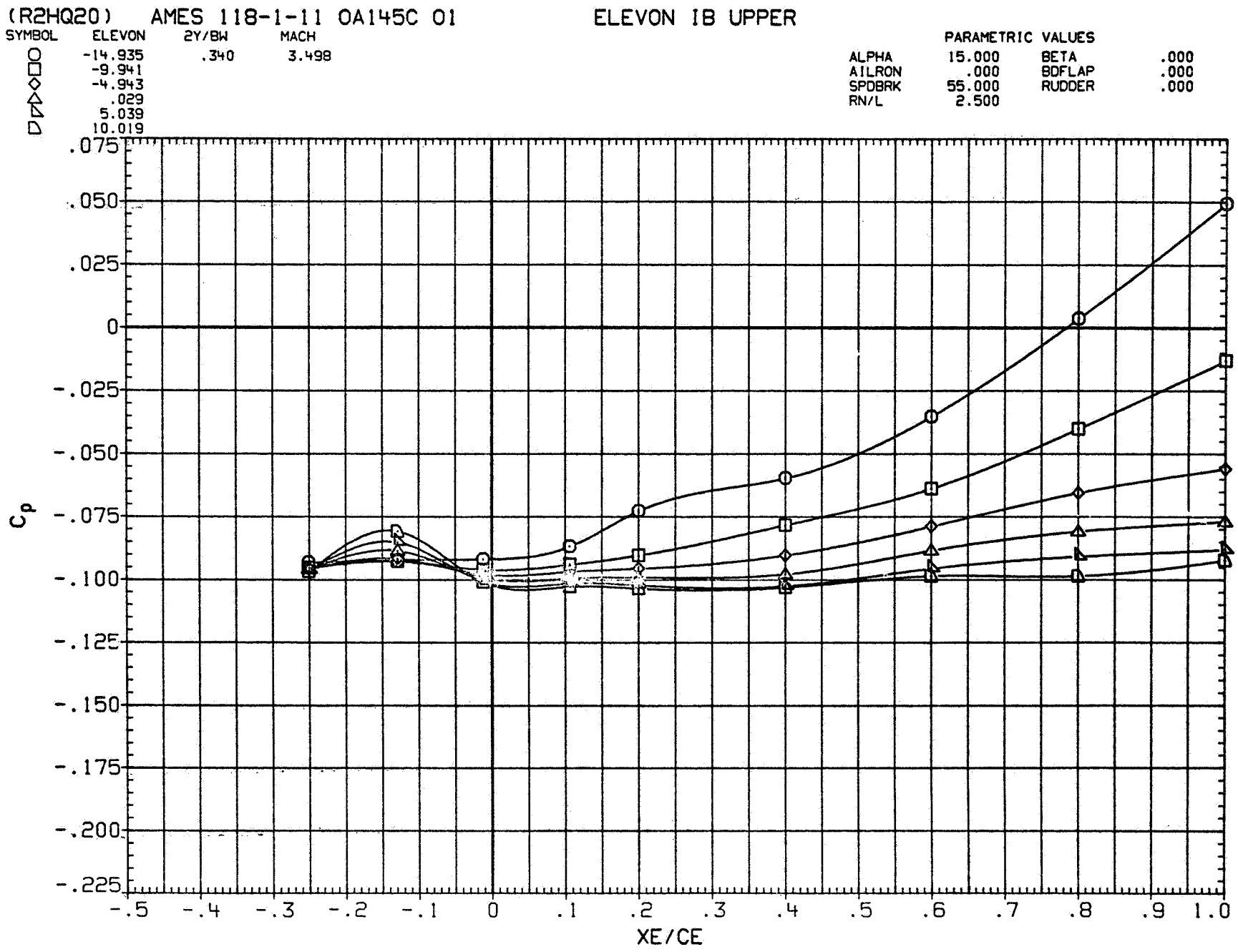


FIG.44 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

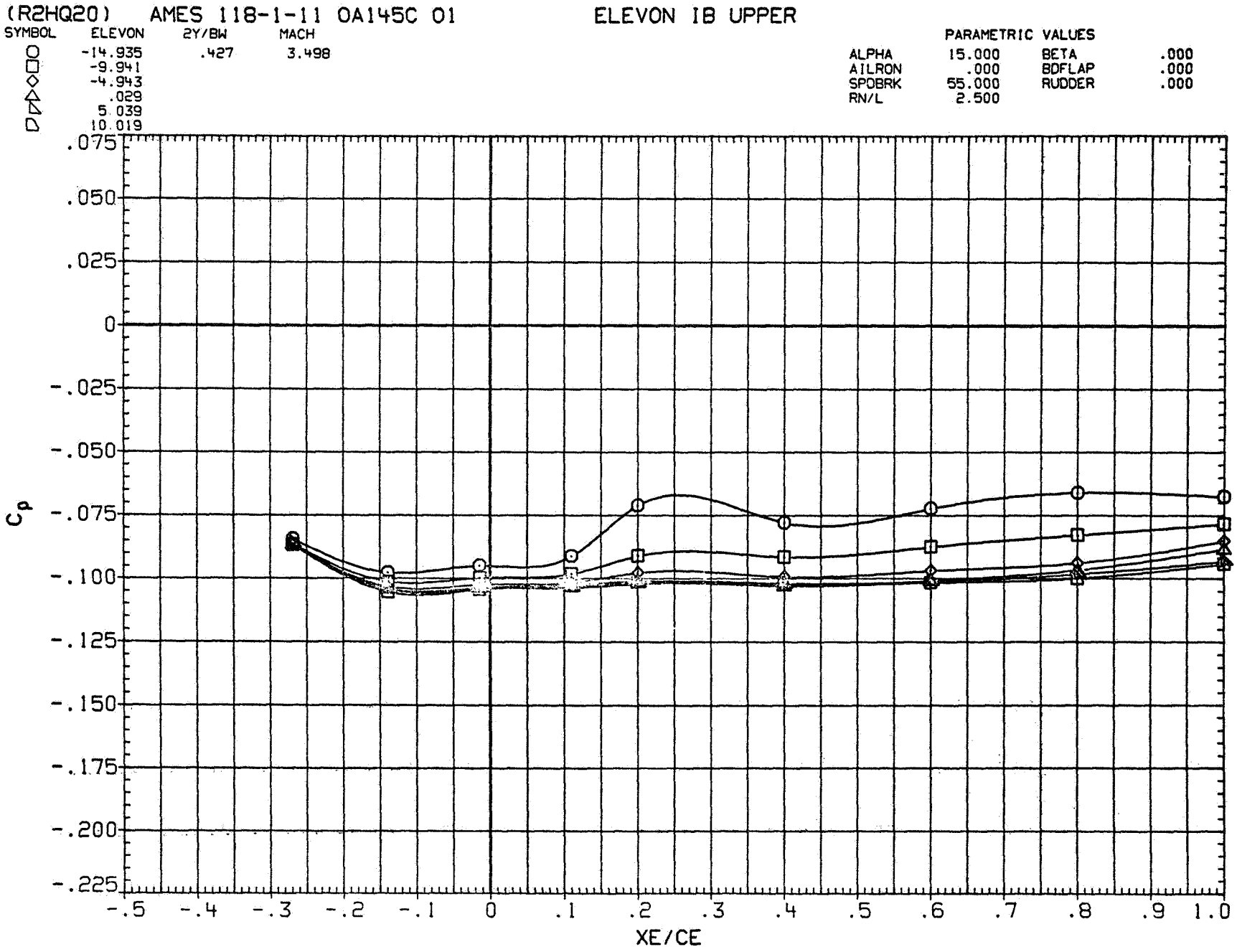


FIG.44 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

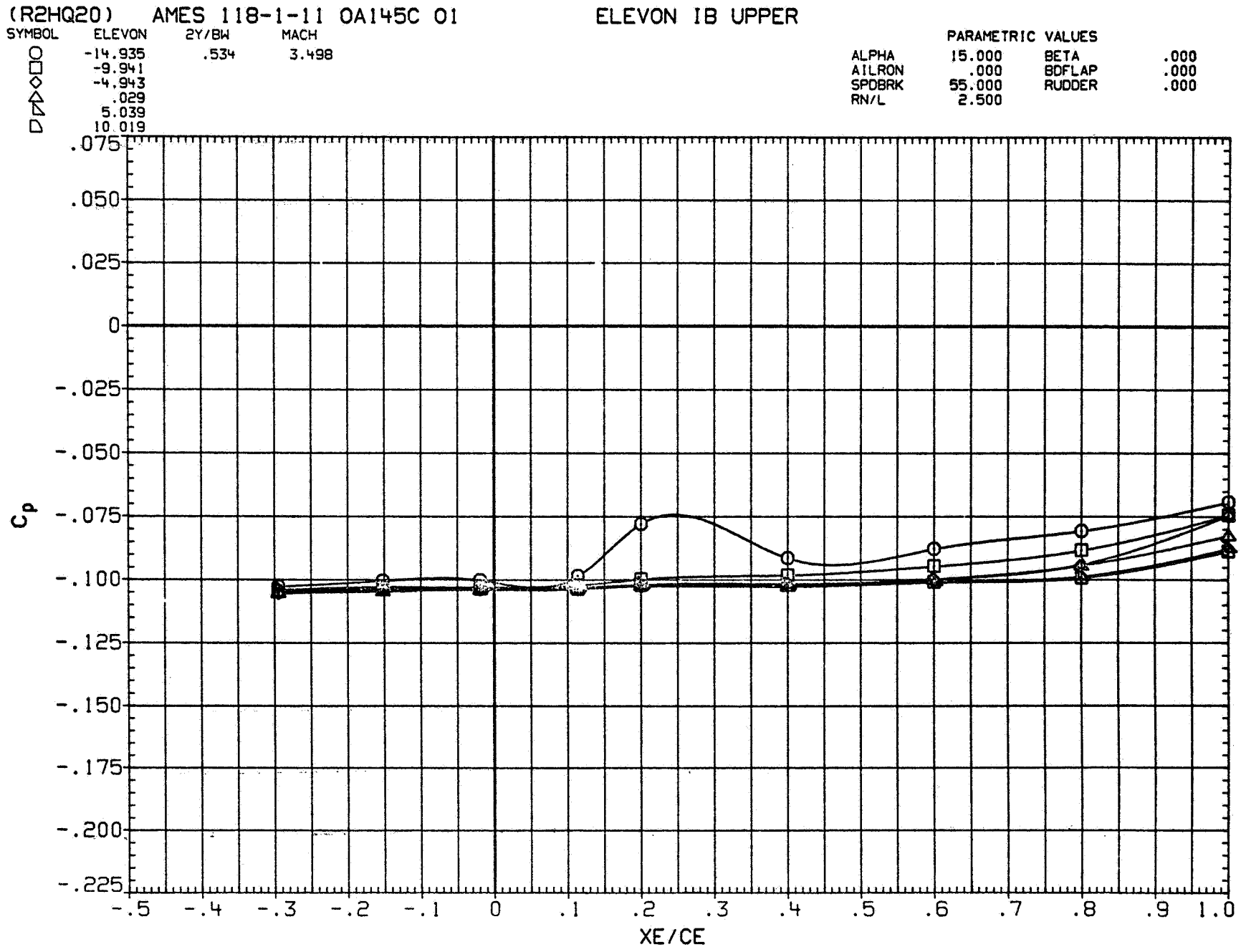


FIG.44 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

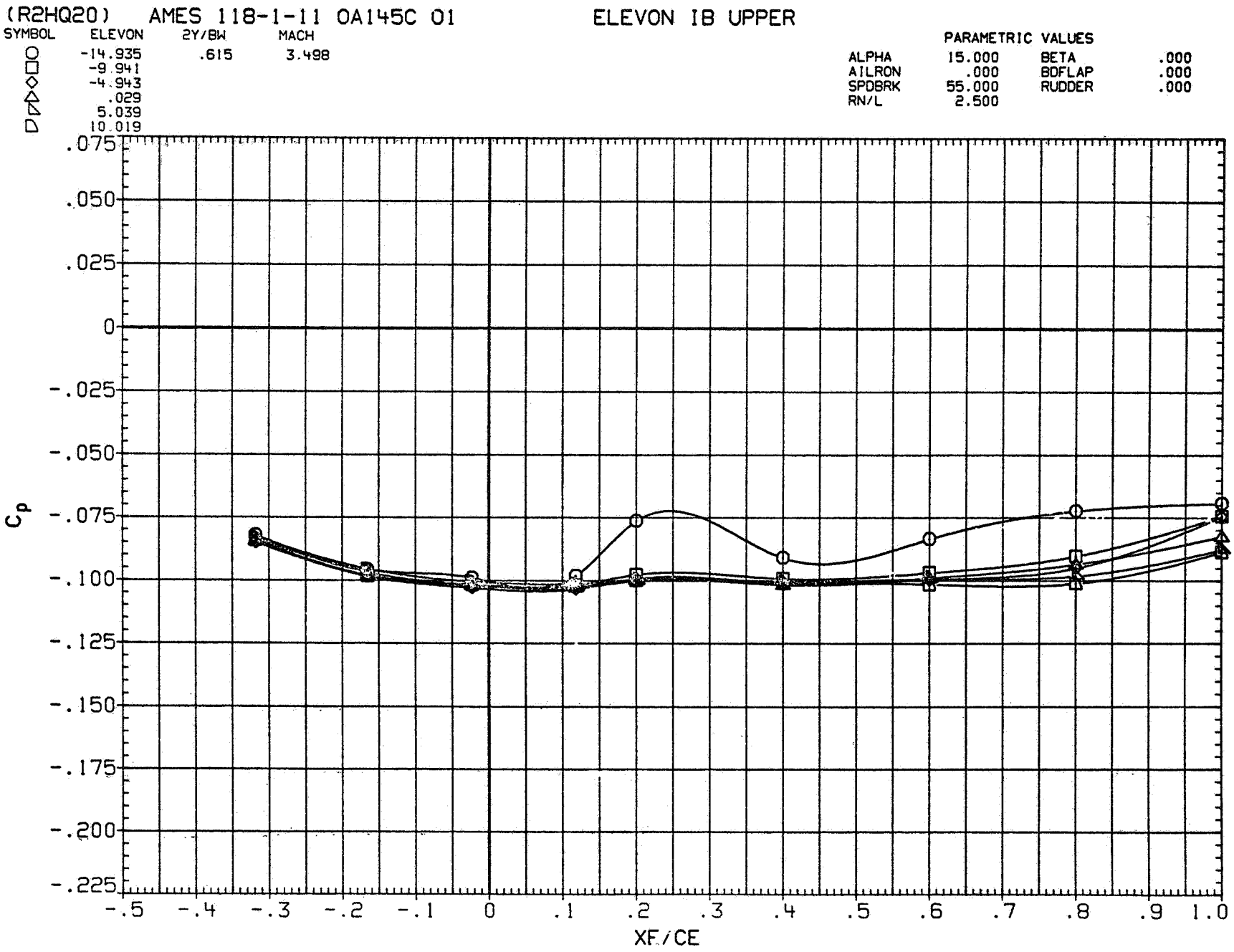


FIG.44 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

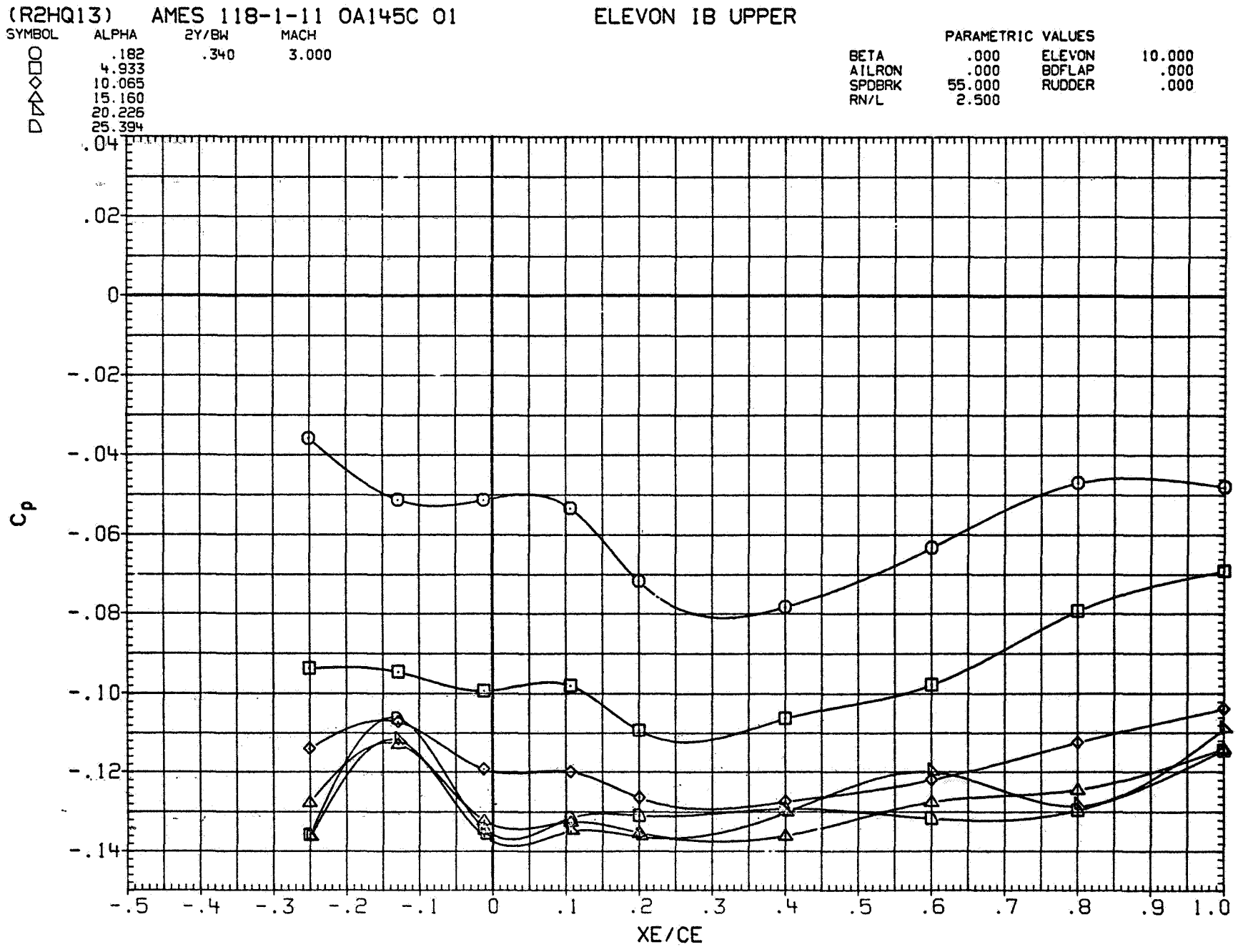


FIG.45 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

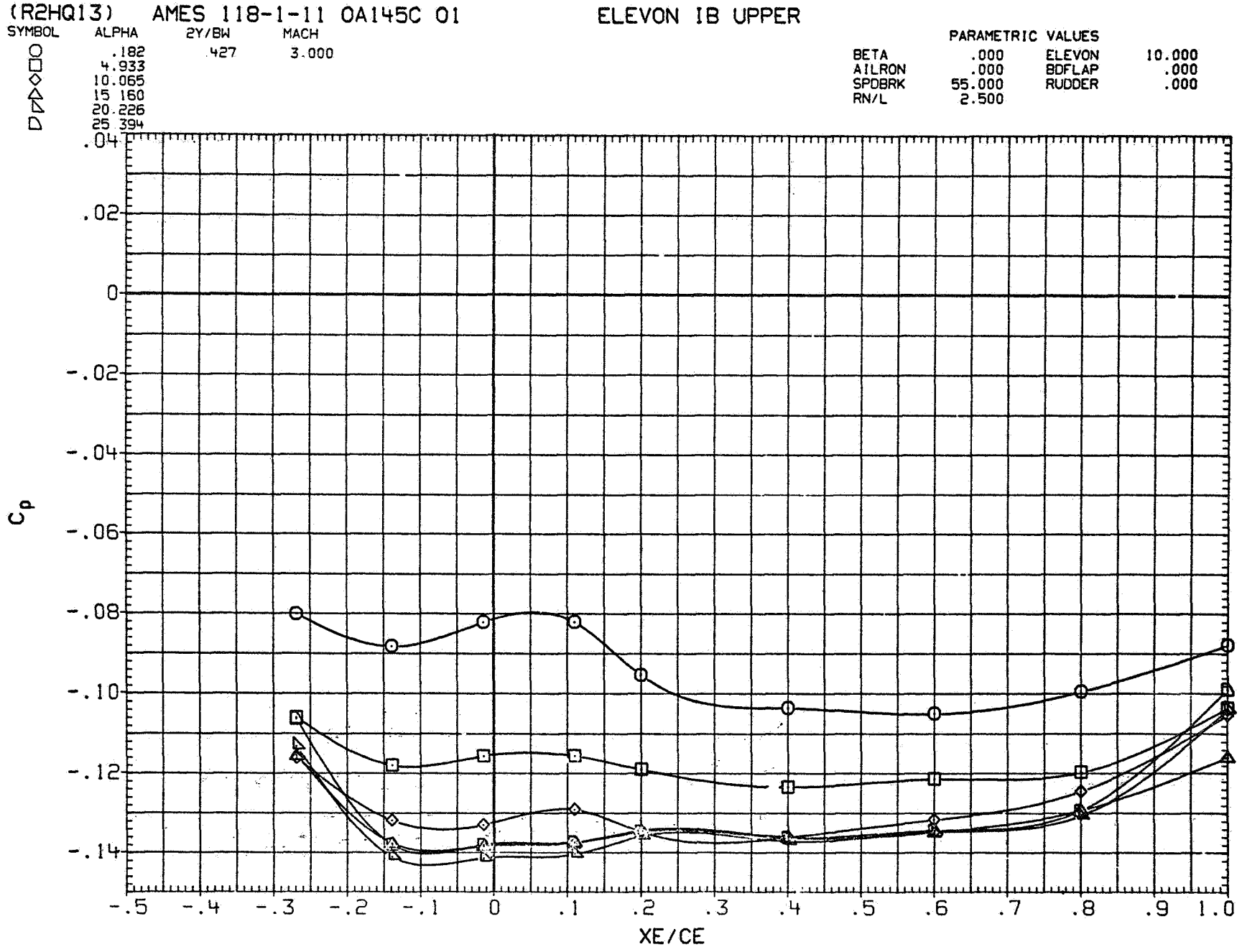


FIG.45 CA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

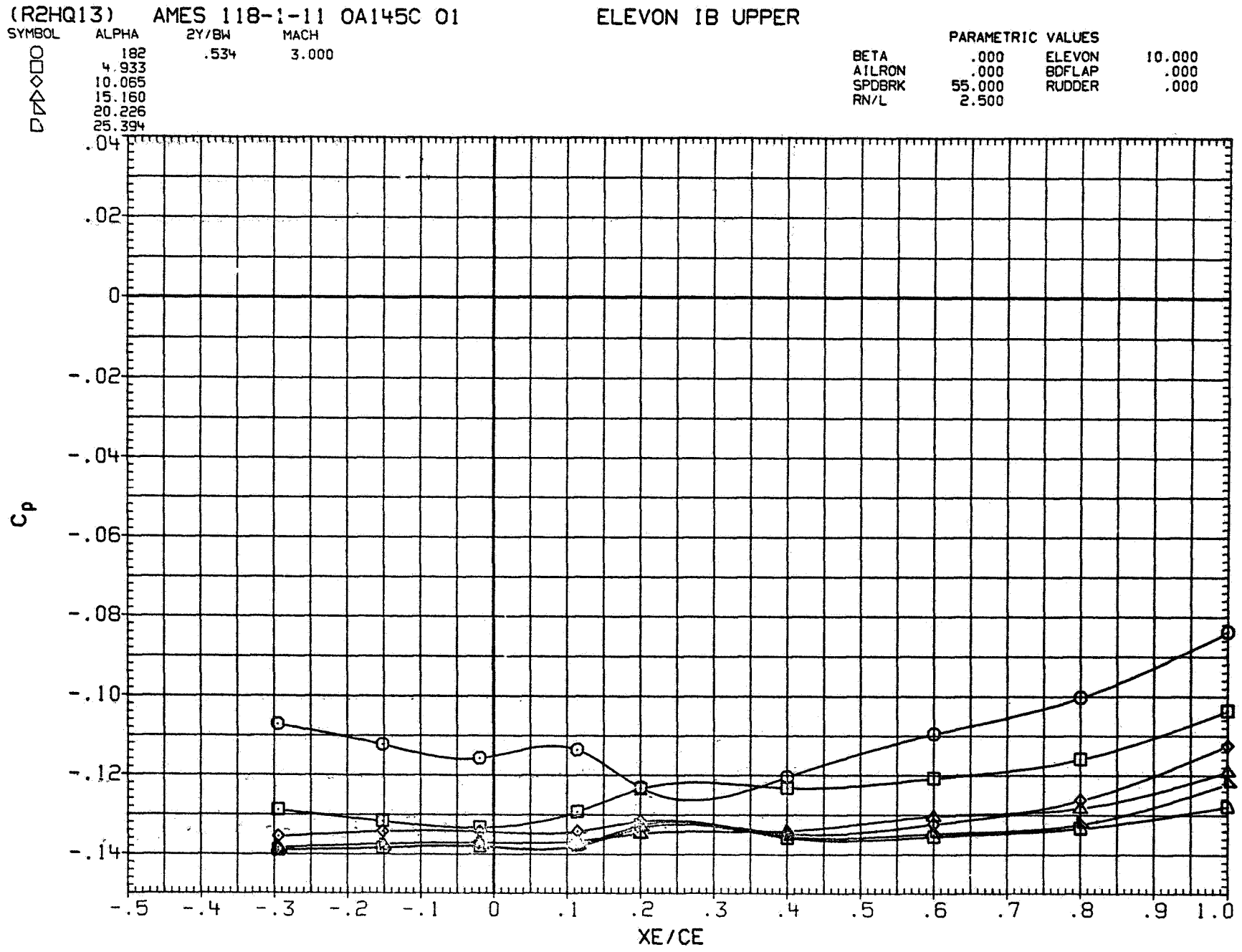


FIG.45 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

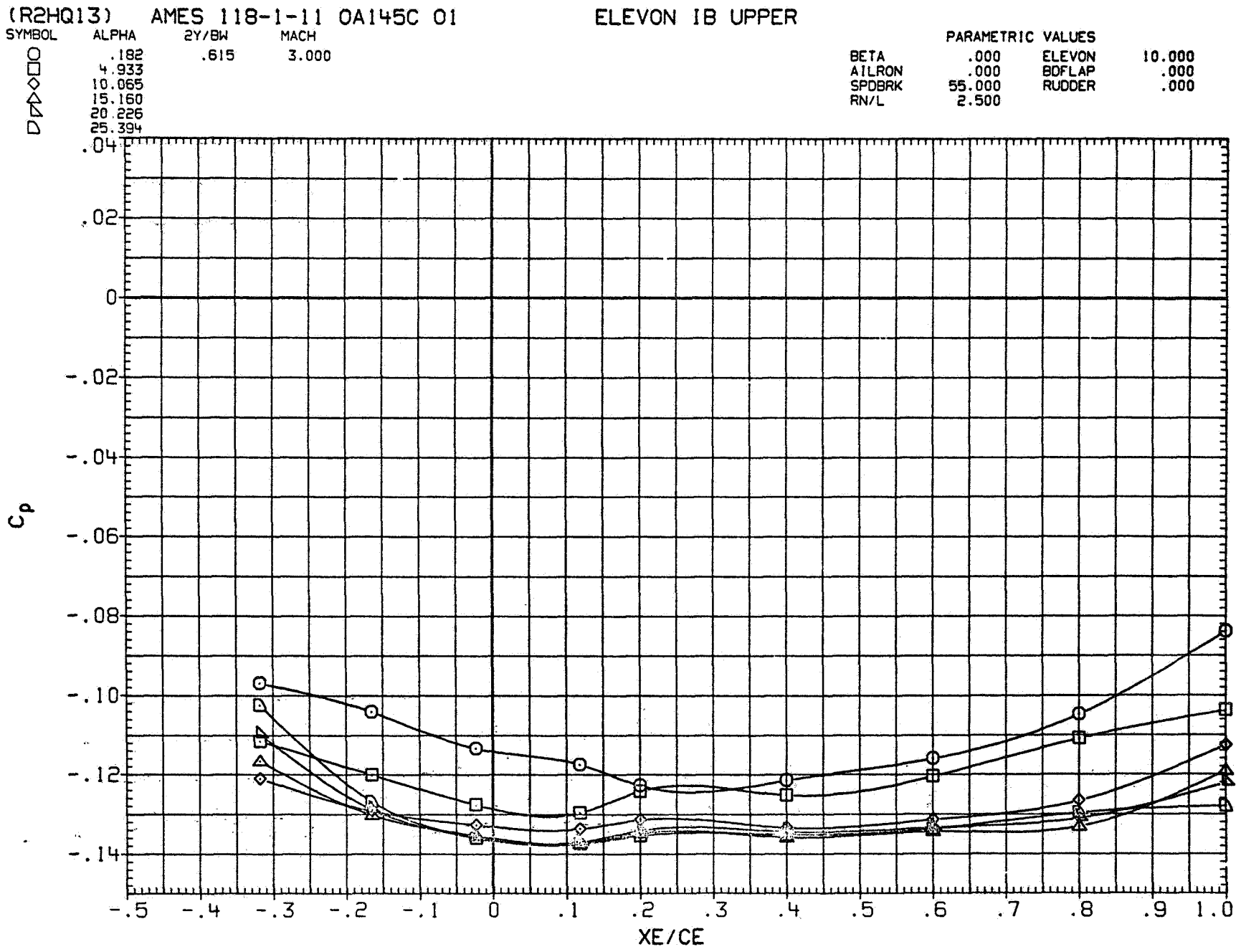


FIG.45 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HQ16) AMES 118-1-11 0A145C 01 ELEVON IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.189	.340	3.001
□	5.024		
◇	10.117		
△	15.226		
◁	20.285		
D	25.372		

PARAMETRIC VALUES

BETA	.000	ELEVON	-10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

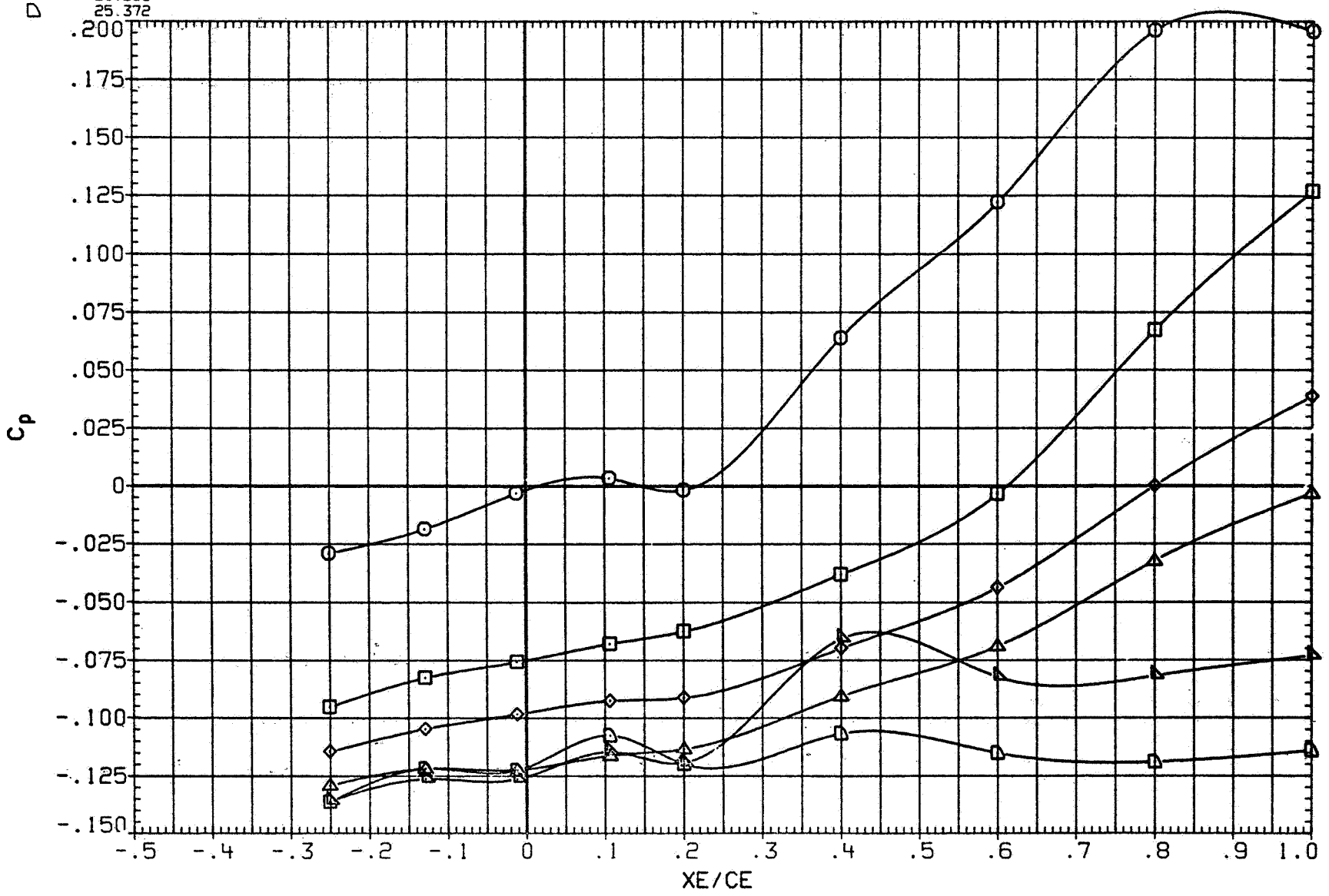


FIG.46 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

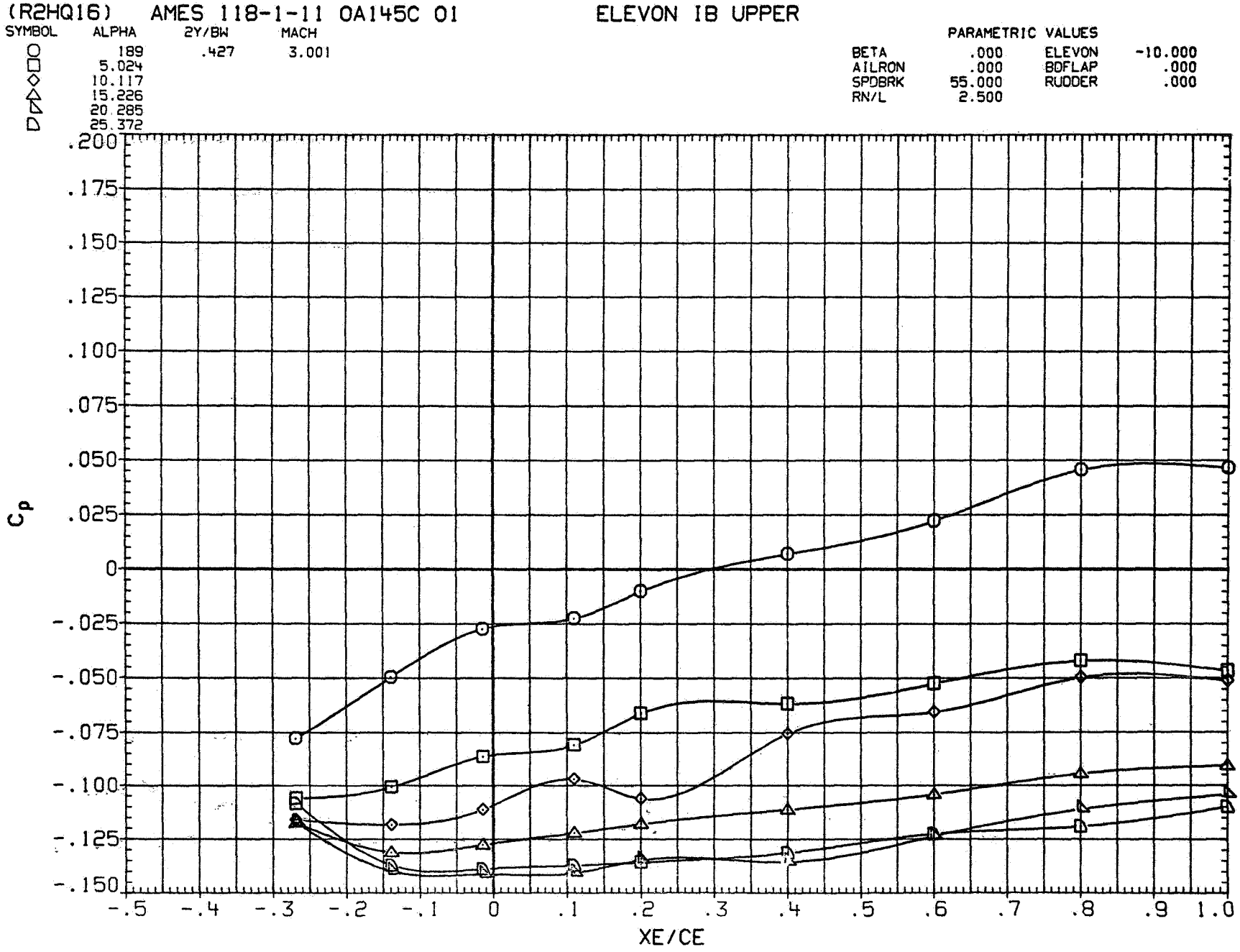


FIG.46 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

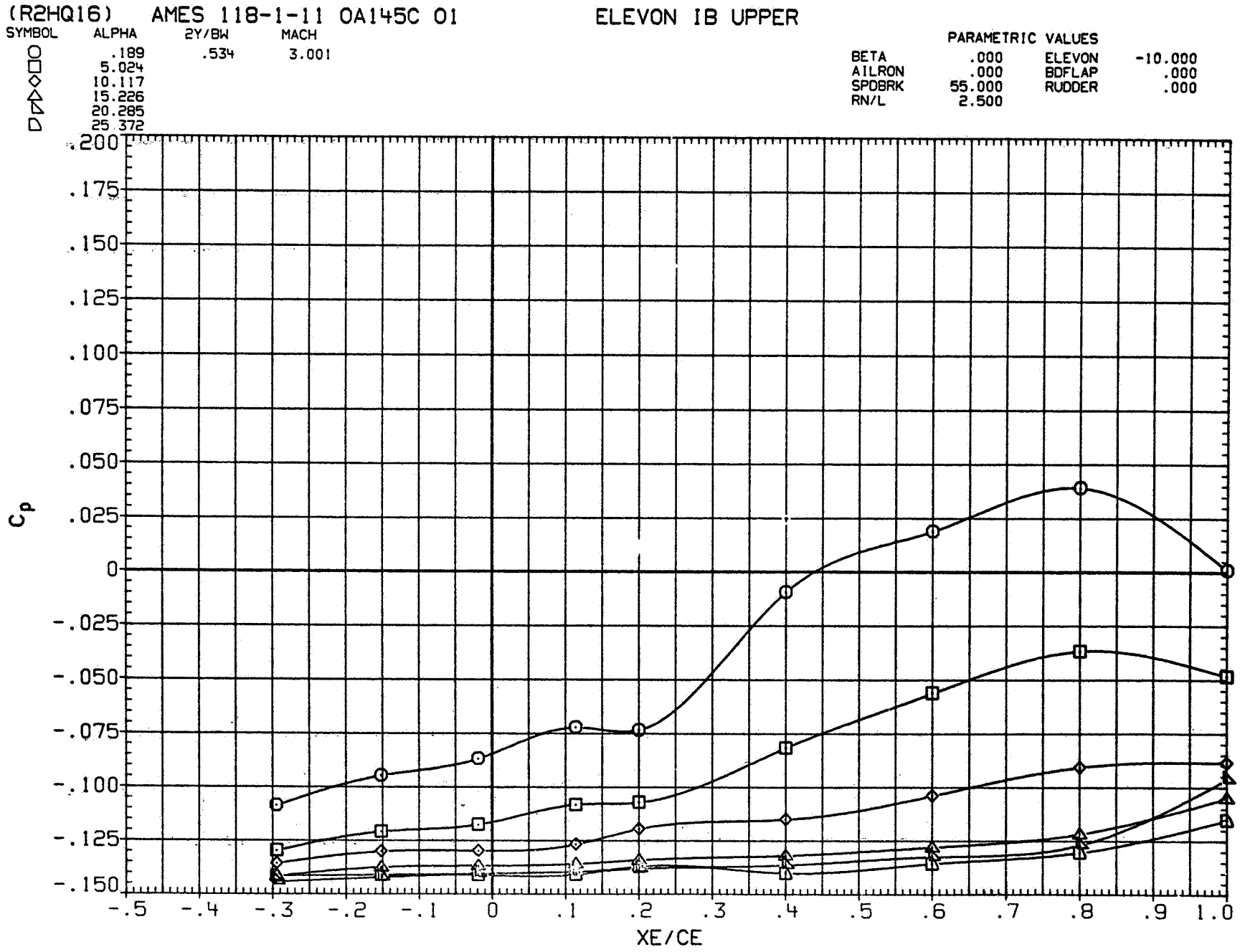


FIG.46 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

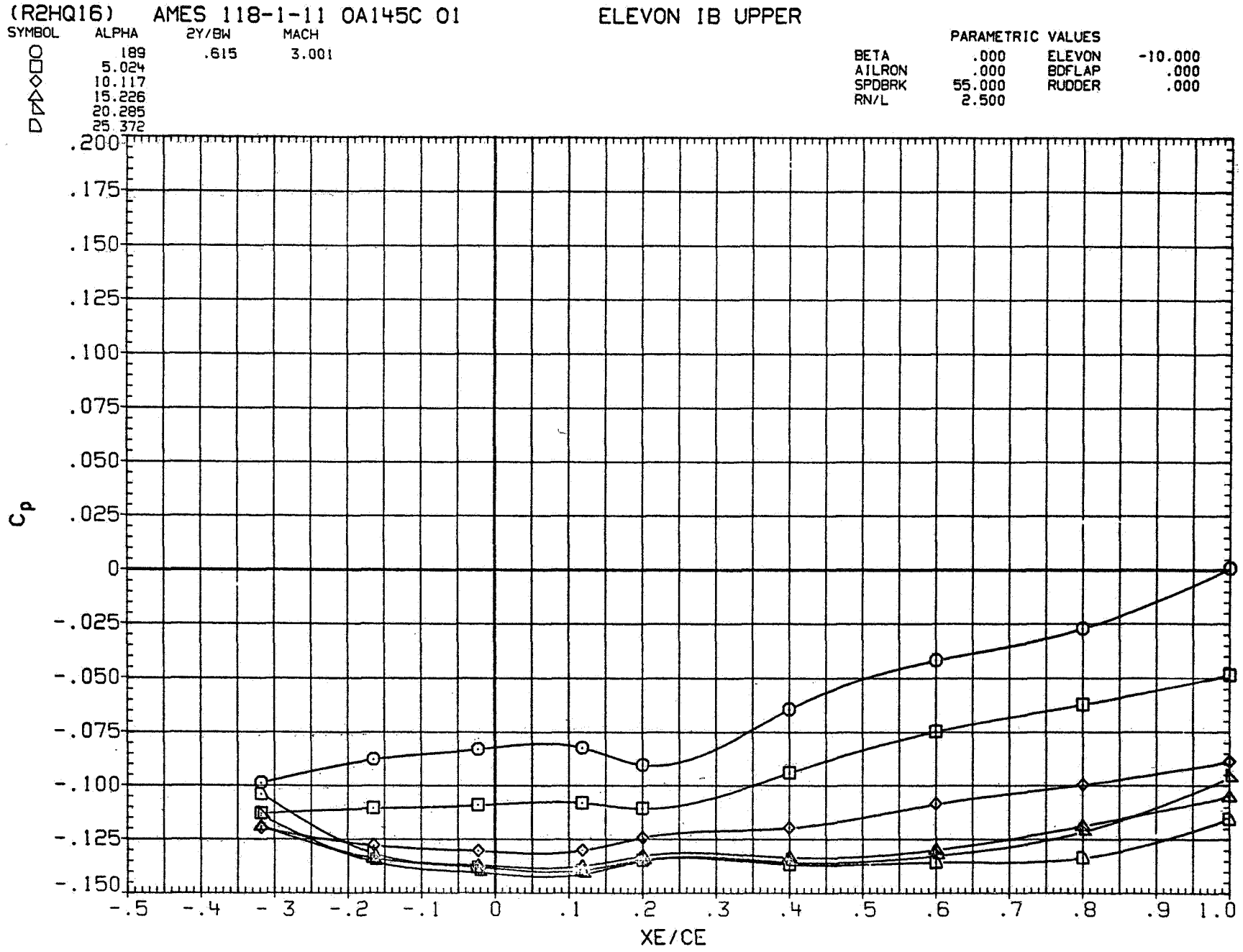


FIG.46 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

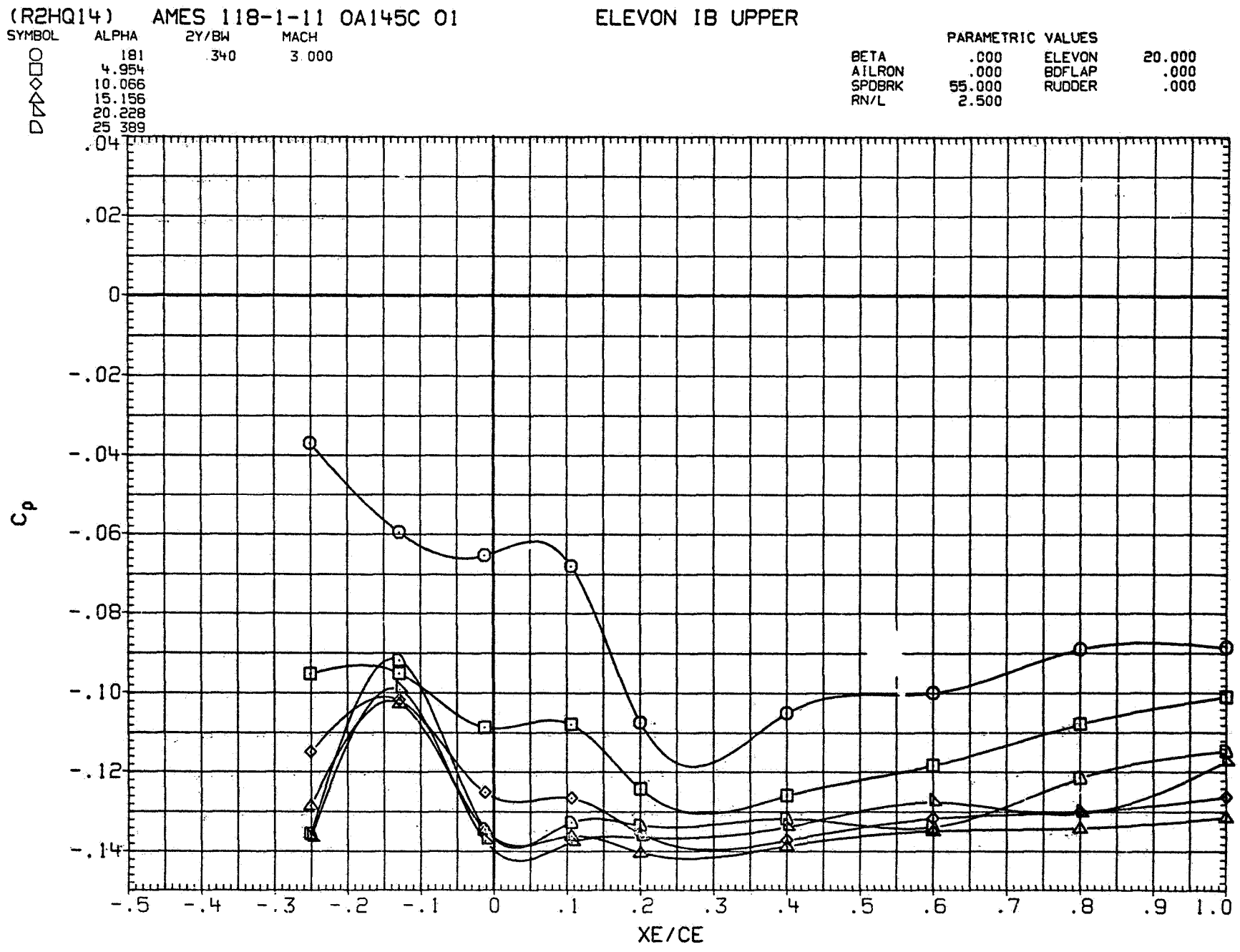


FIG 47 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

(R2HQ14) AMES 118-1-11 0A145C 01 ELEVON IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	181	.427	3.000
□	4.954		
◇	10.066		
△	15.156		
◁	20.228		
D	25.389		

PARAMETRIC VALUES

BETA	.000	ELEVON	20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

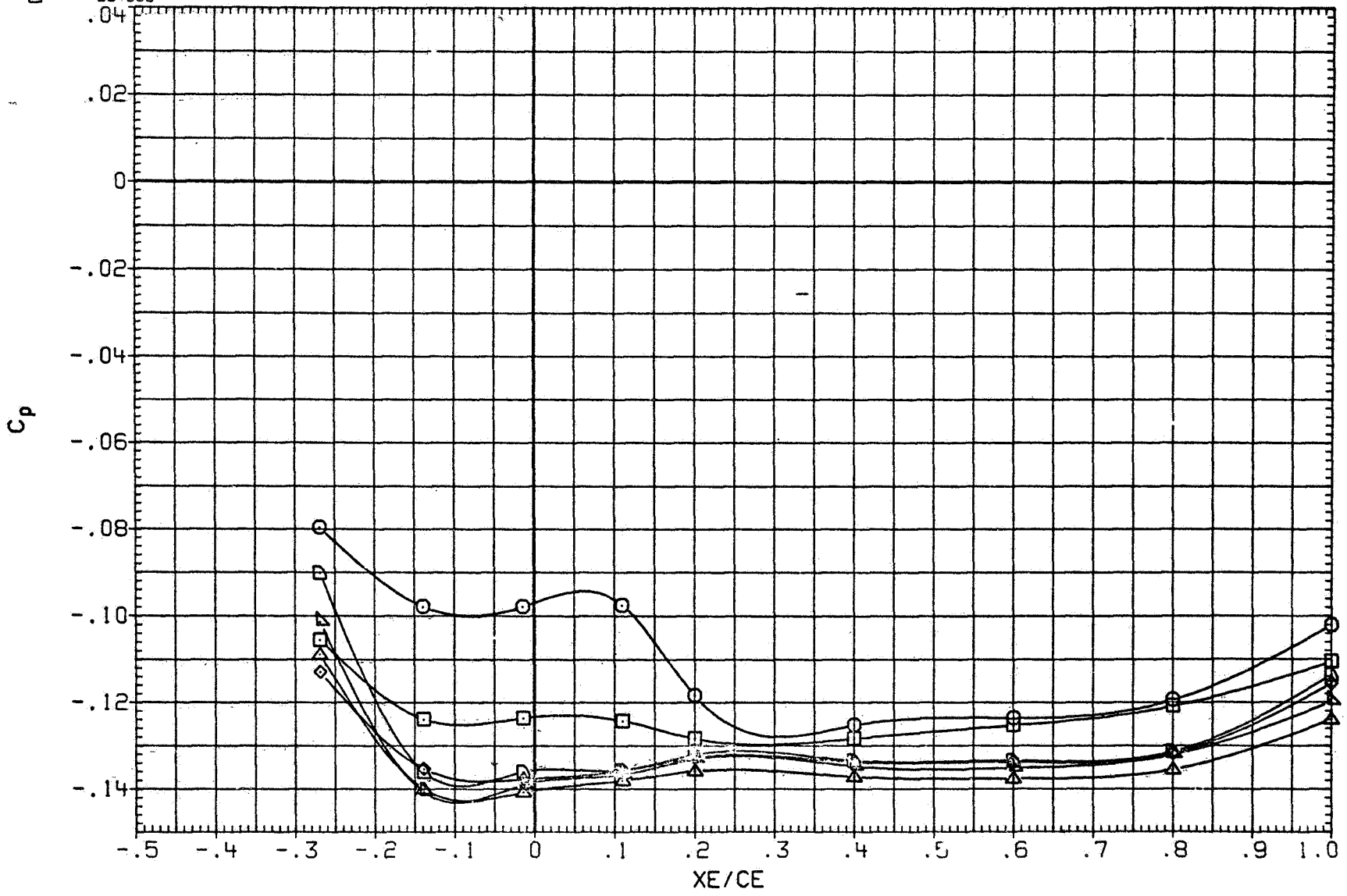


FIG.47 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

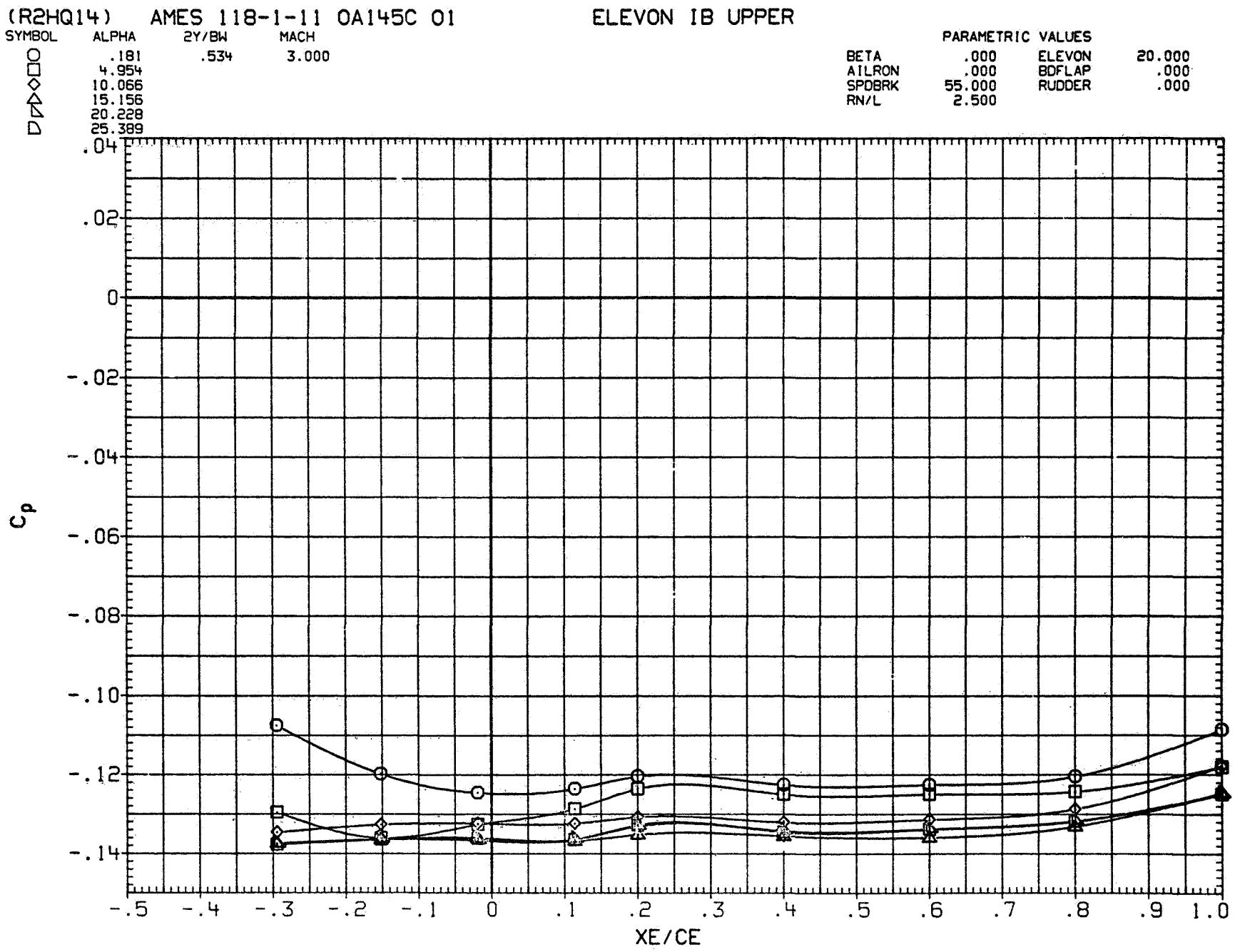


FIG.47 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

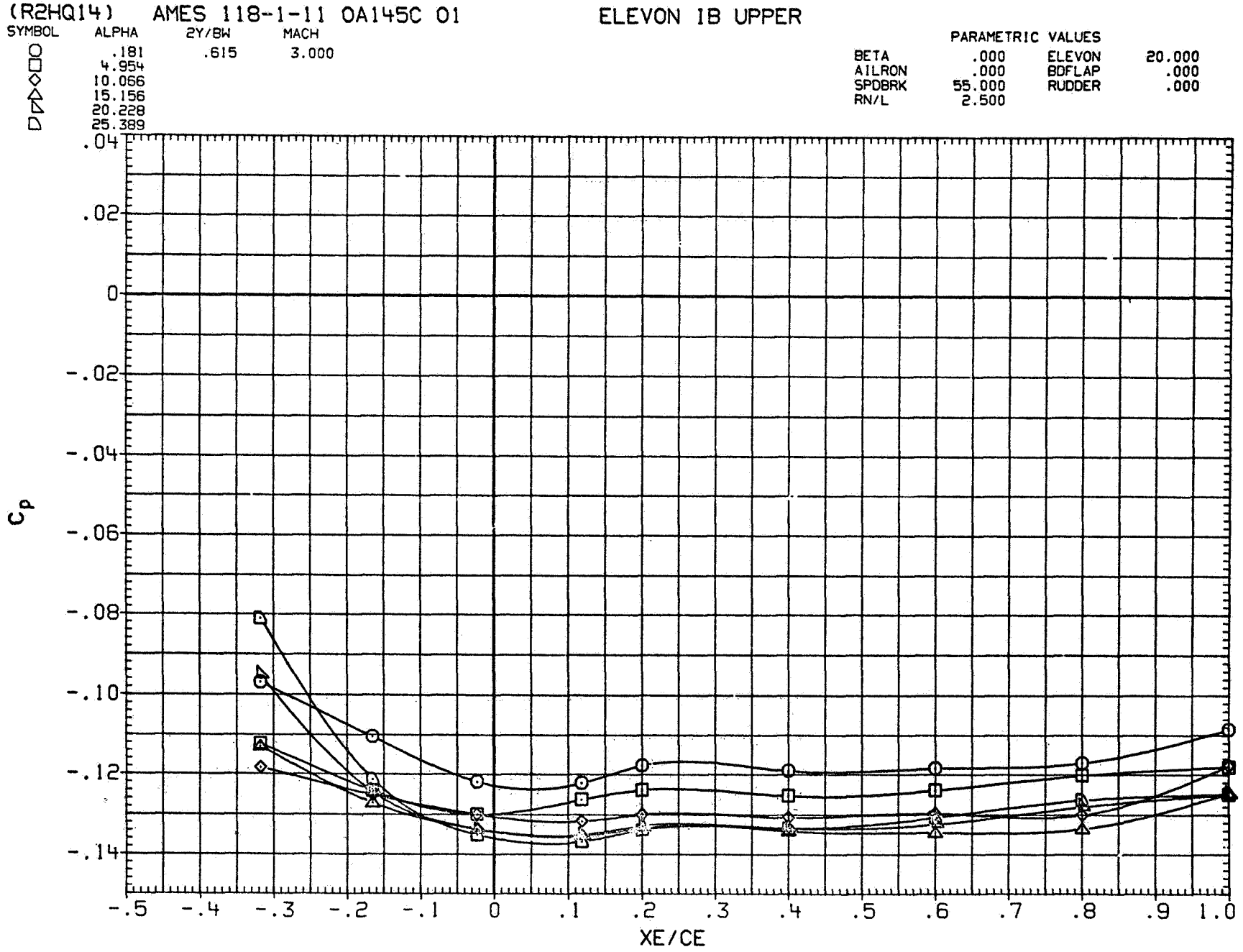


FIG.47 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

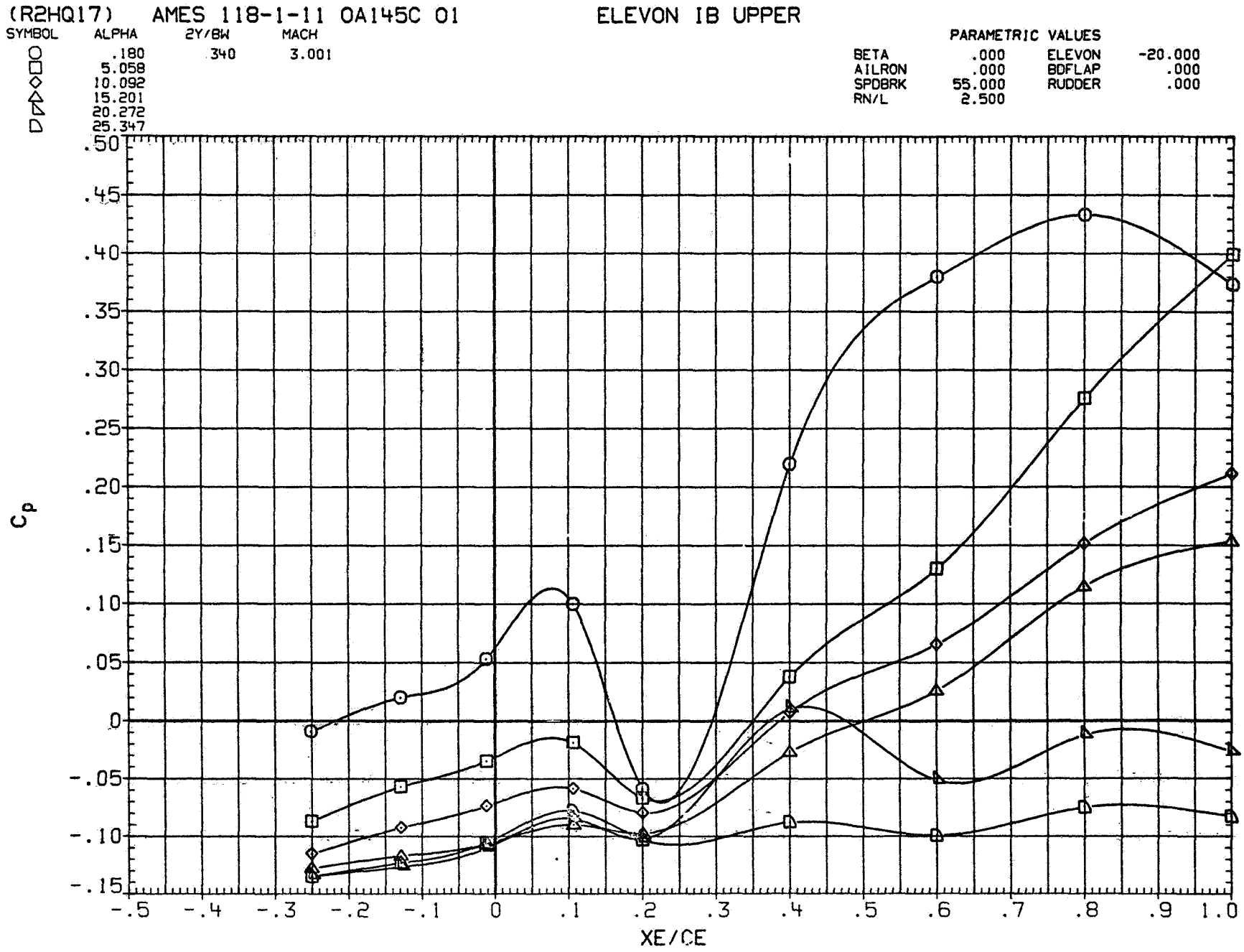


FIG.48 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

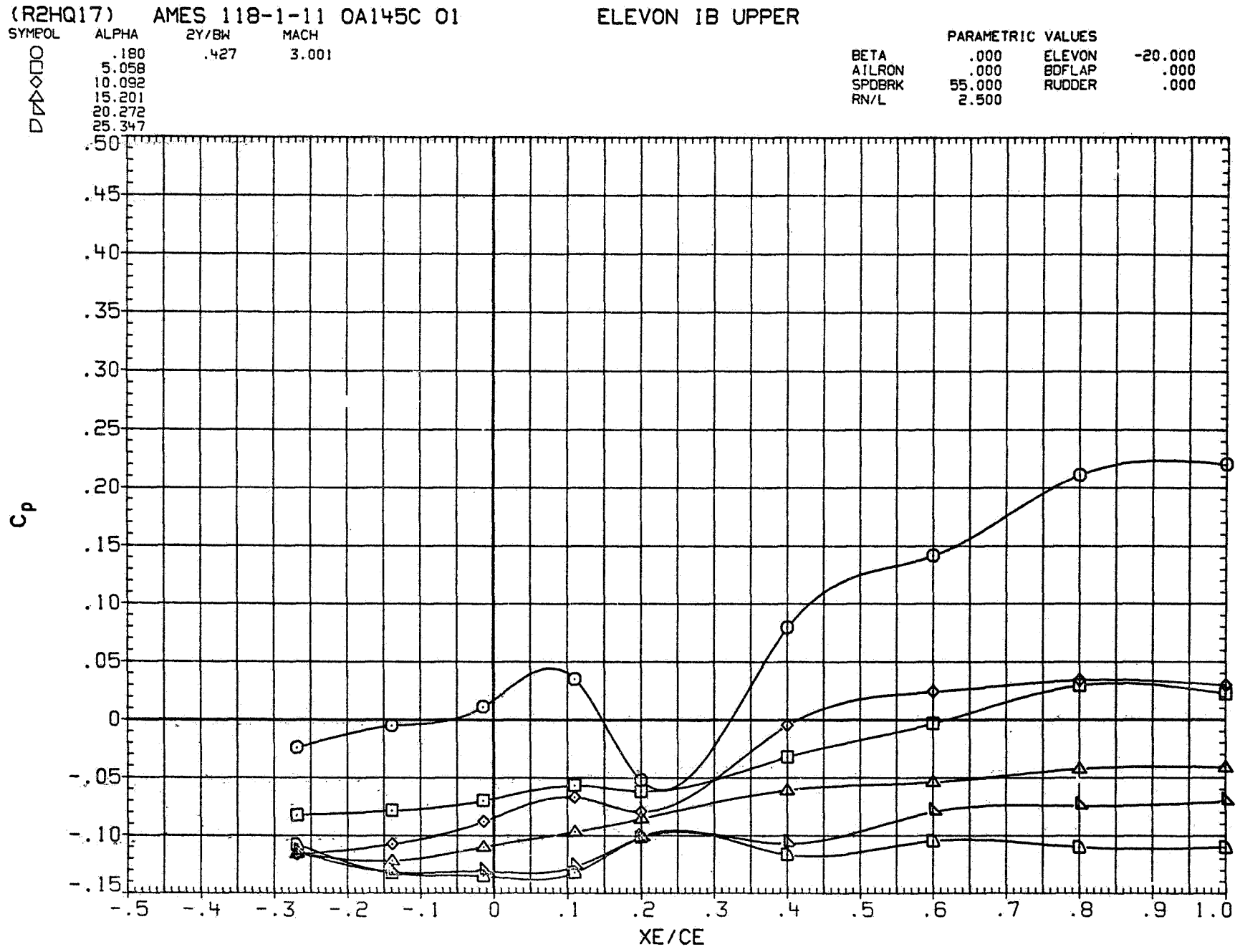


FIG.48 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

(R2HQ17) AMES 118-1-11 OA145C 01 ELEVON IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.180	.534	3.001
□	5.058		
◇	10.092		
△	15.201		
◁	20.272		
▷	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

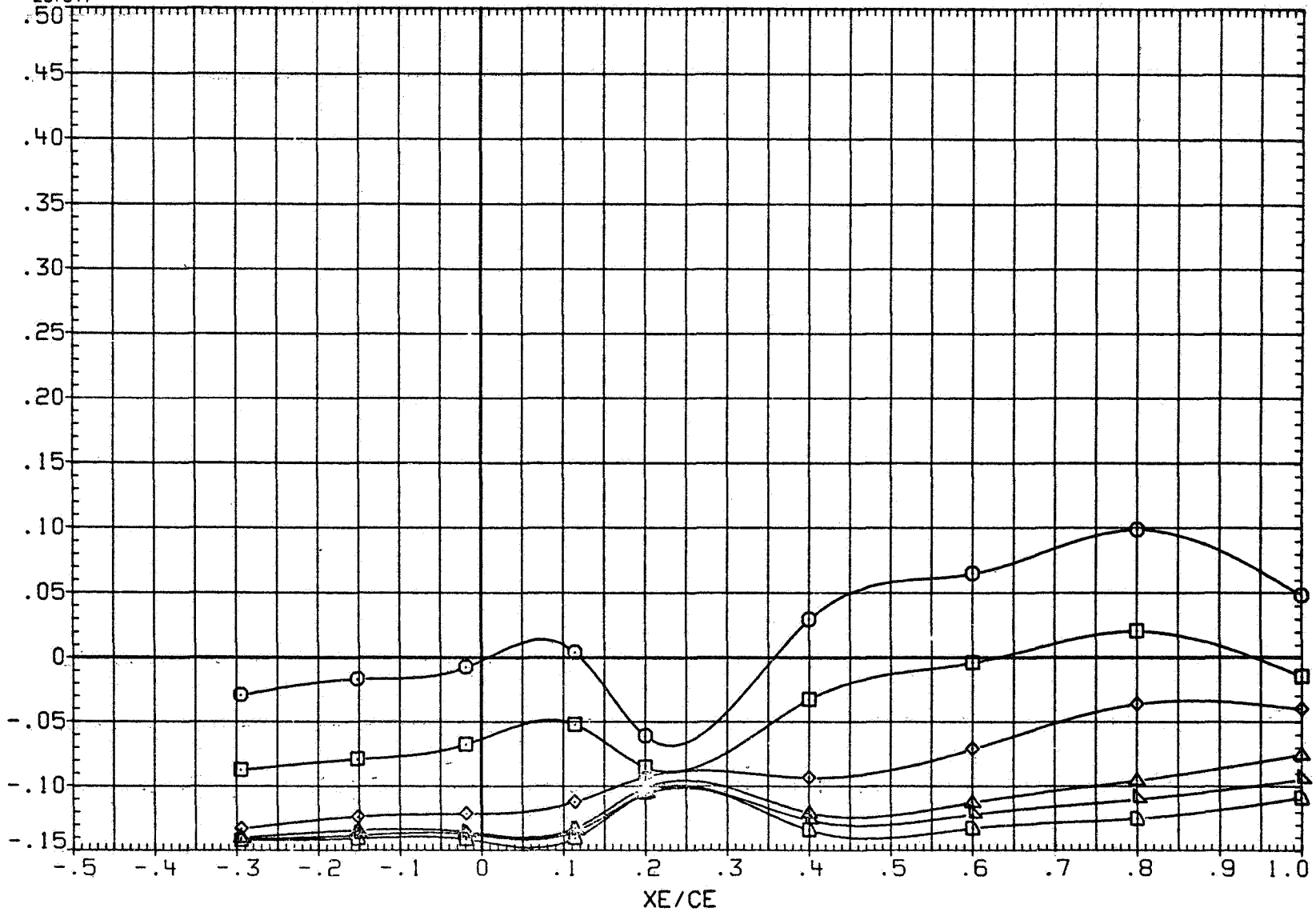


FIG.48 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

(R2HQ17) AMES 118-1-11 OA145C 01

ELEVON IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.180	.615	3.001
□	5.058		
◇	10.092		
△	15.201		
▷	20.272		
▱	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

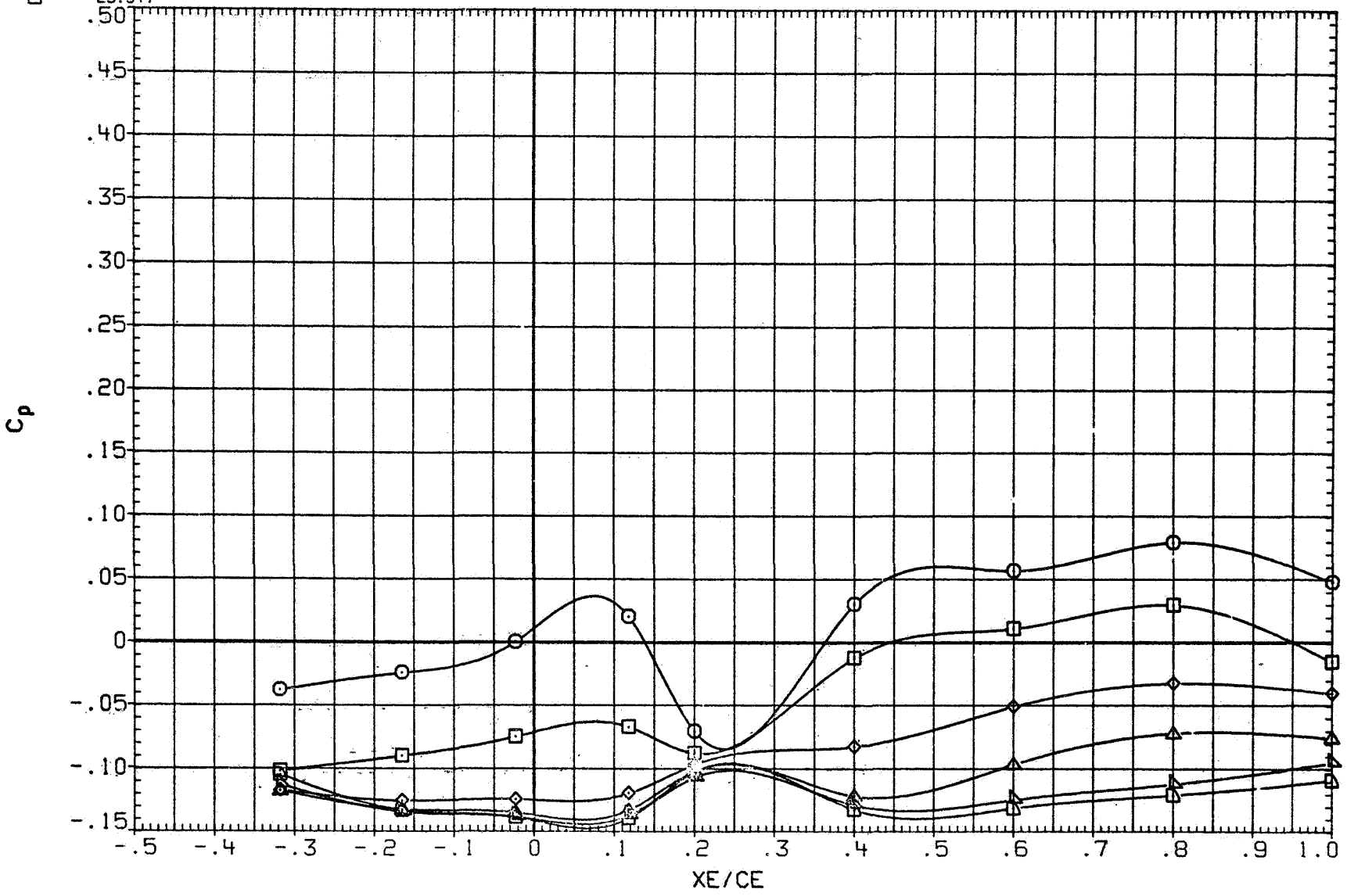


FIG.48 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

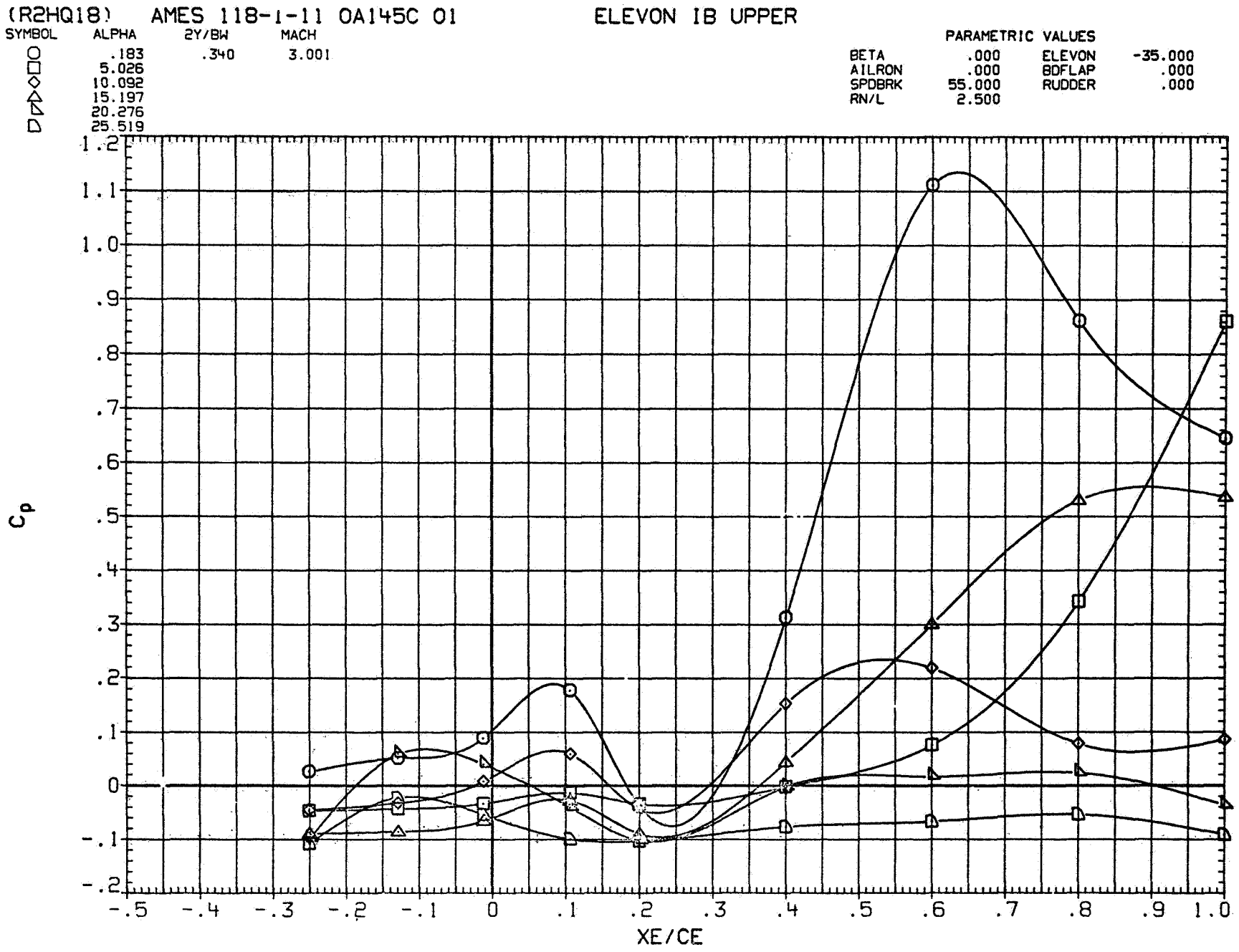


FIG.49 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

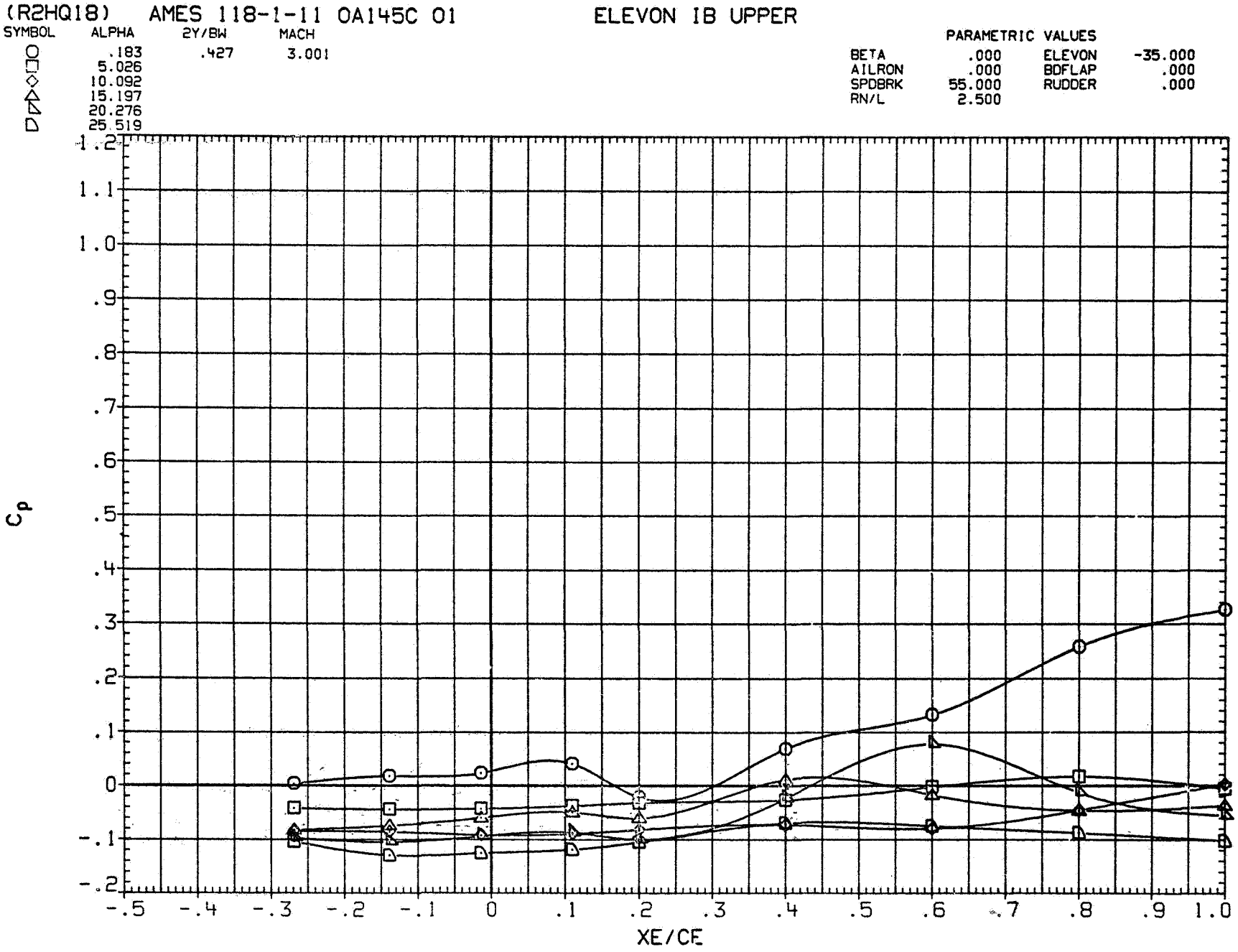


FIG.49 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

(R2HQ18) AMES 118-1-11 OA145C 01

ELEVON IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.183	.534	3.001
□	5.026		
◇	10.092		
△	15.197		
◁	20.276		
▷	25.519		

PARAMETRIC VALUES

BETA	.000	ELEVON	-35.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

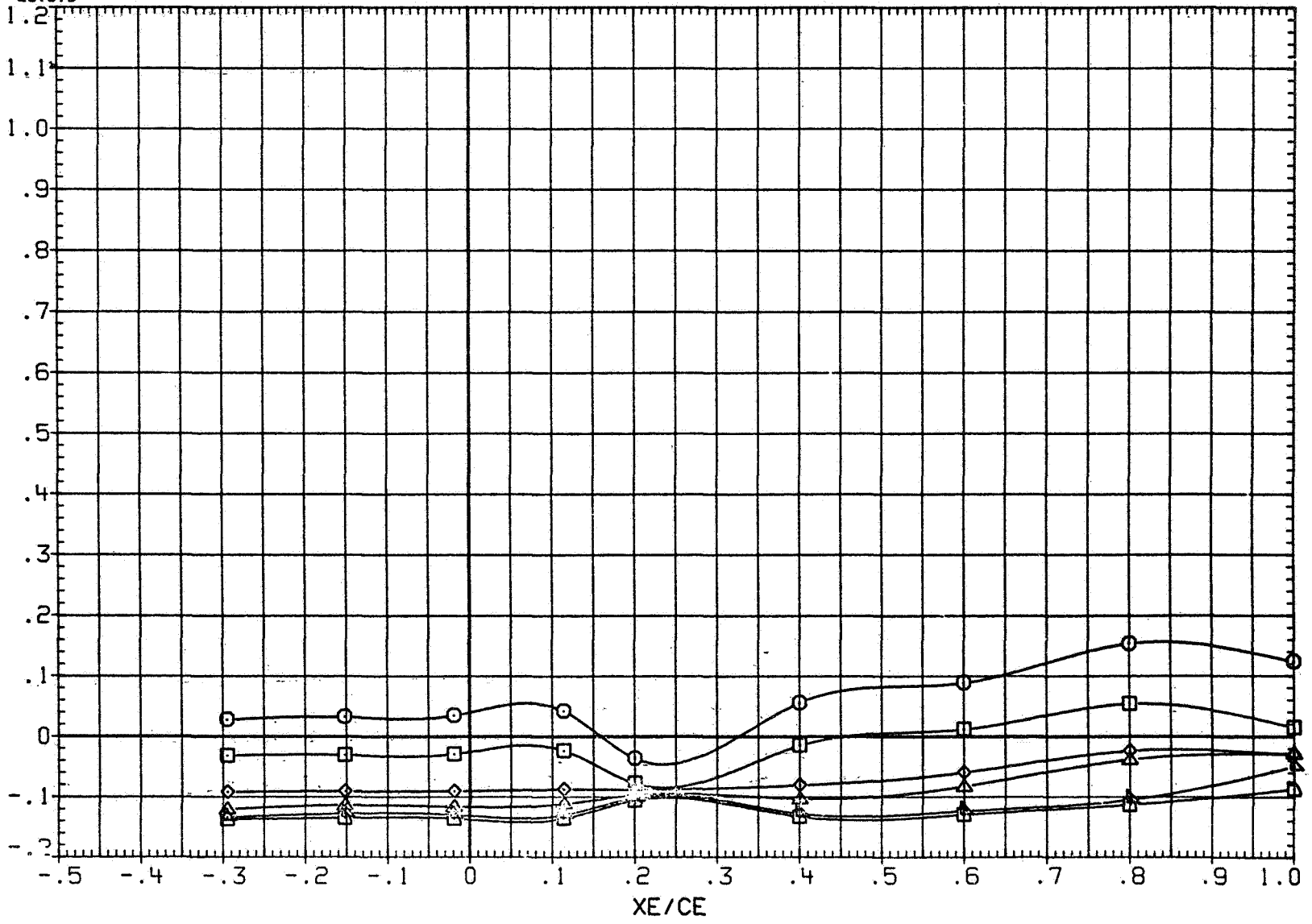


FIG.49 OA145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

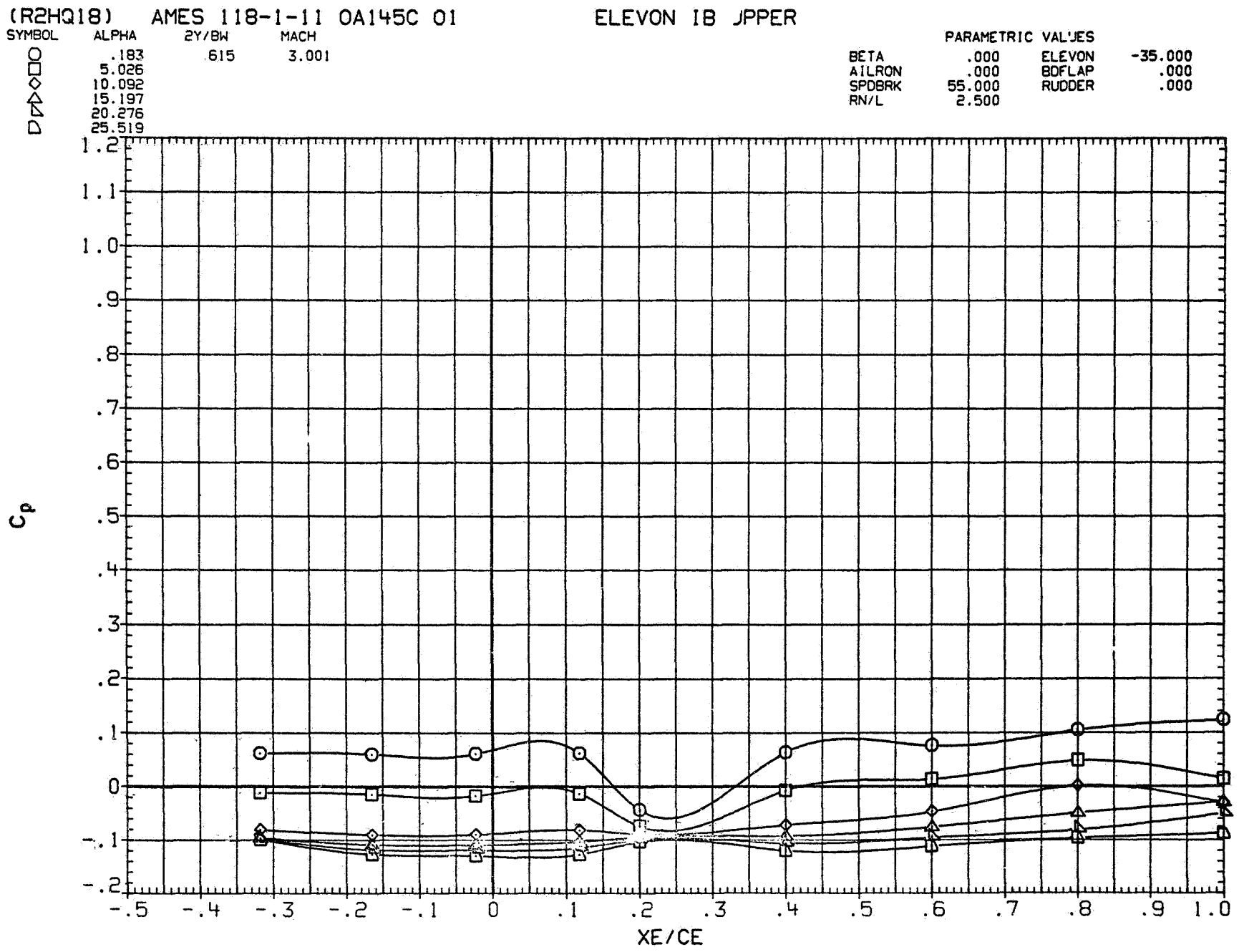


FIG.49 0A145C ELEVON CP VS. XE/CE
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

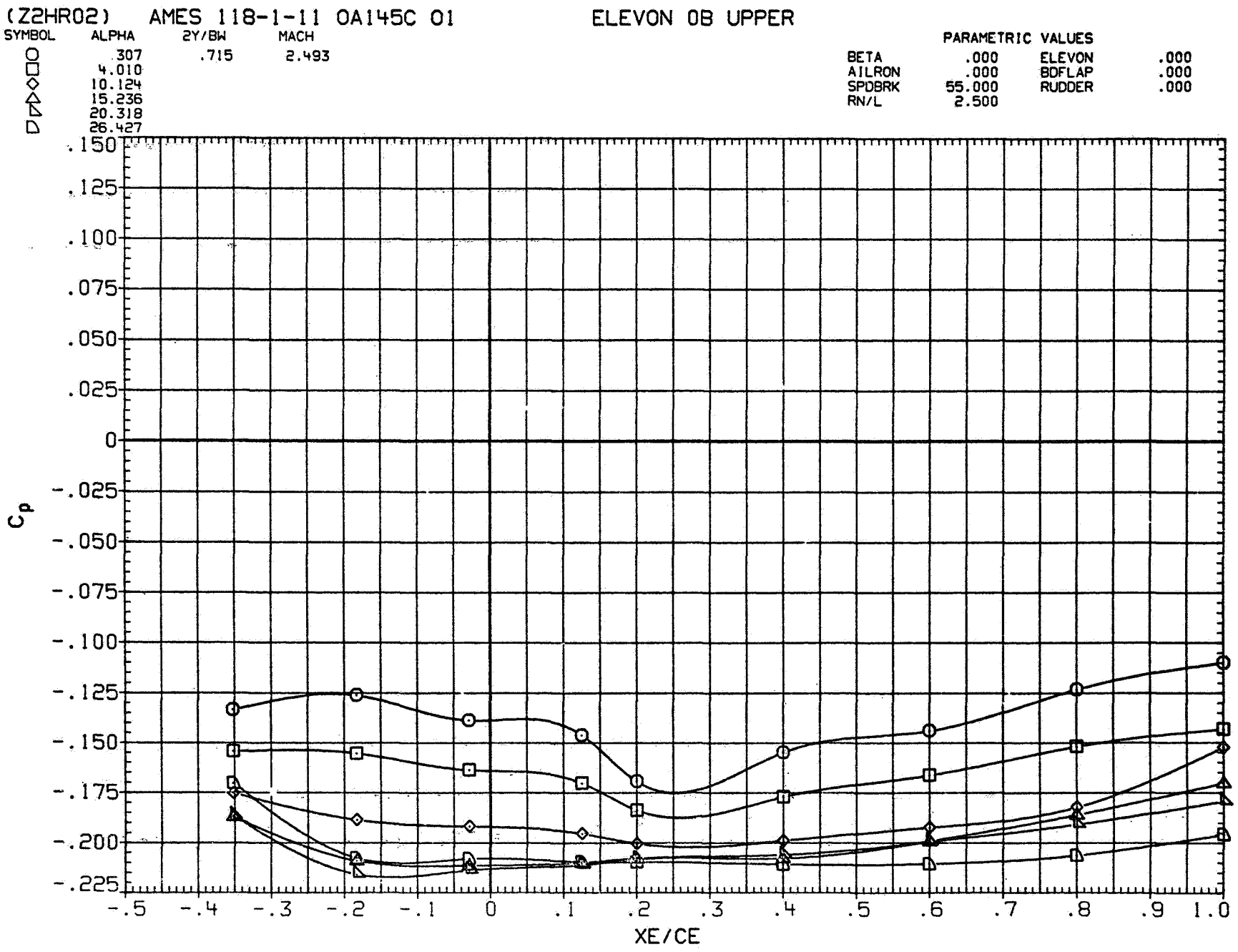


FIG.50 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

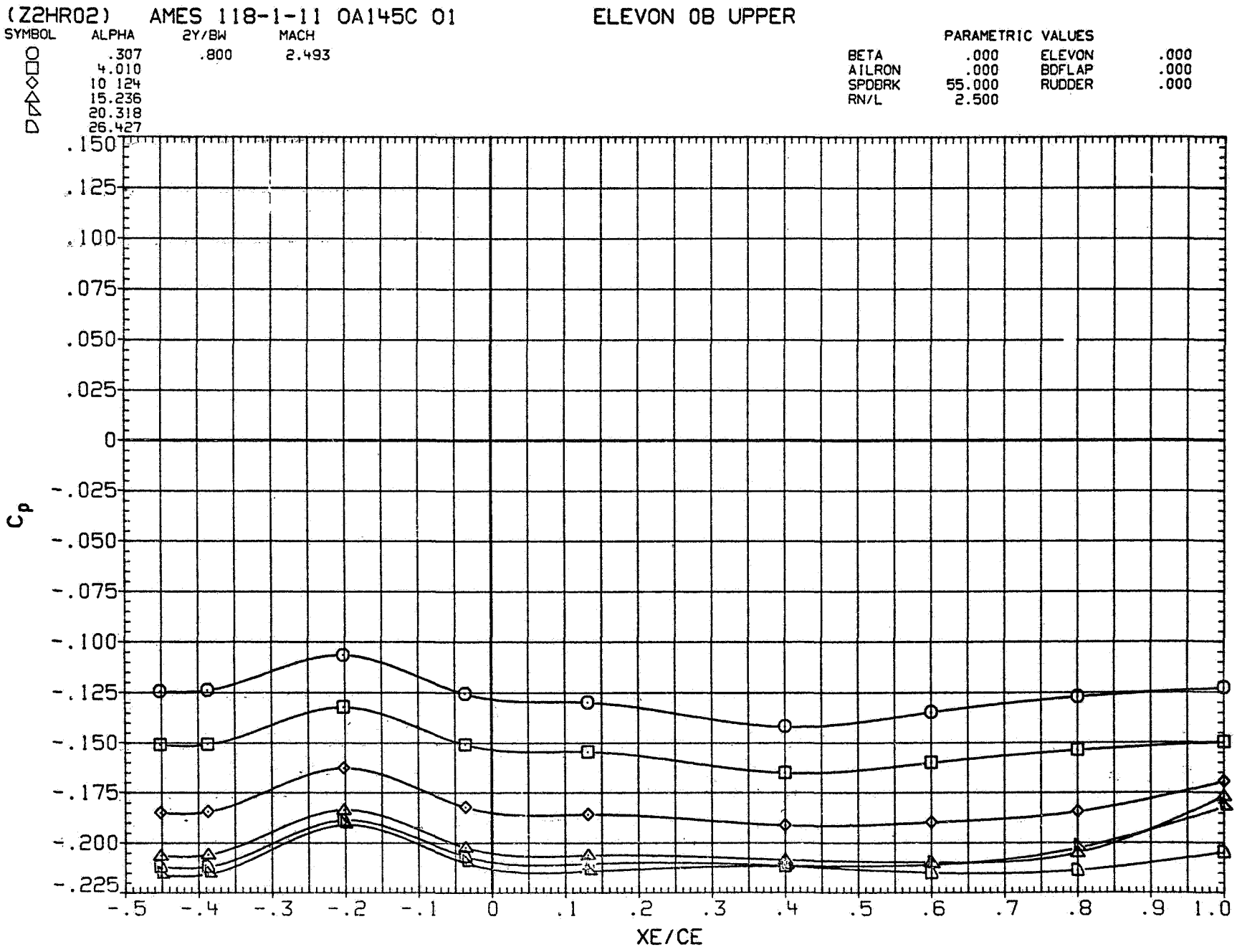


FIG.50 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

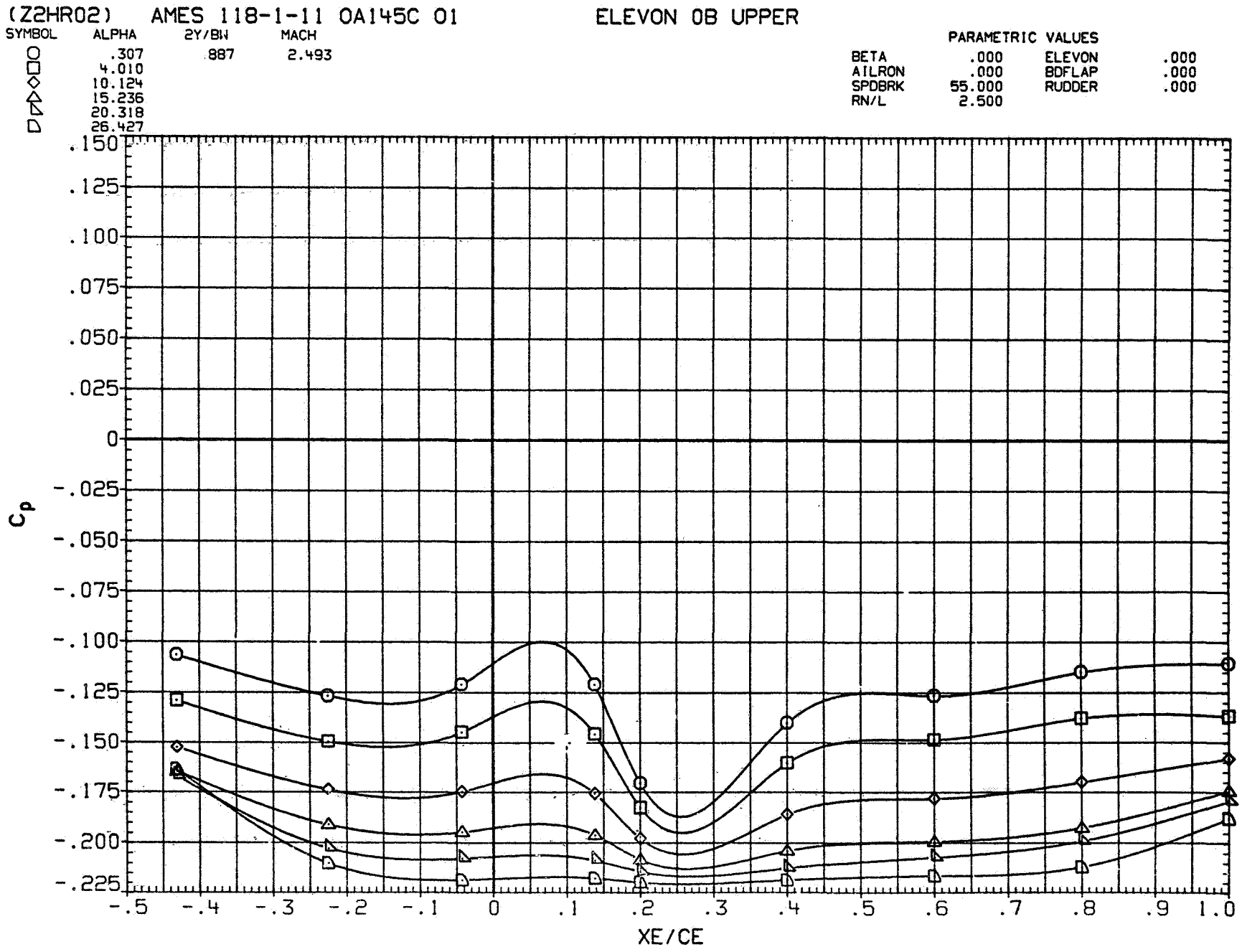


FIG.50 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(Z2HR02) AMES 118-1-11 OA145C 01 ELEVON OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.307	.960	2.493
□	4.010		
◇	10.124		
△	15.236		
◁	20.318		
D	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

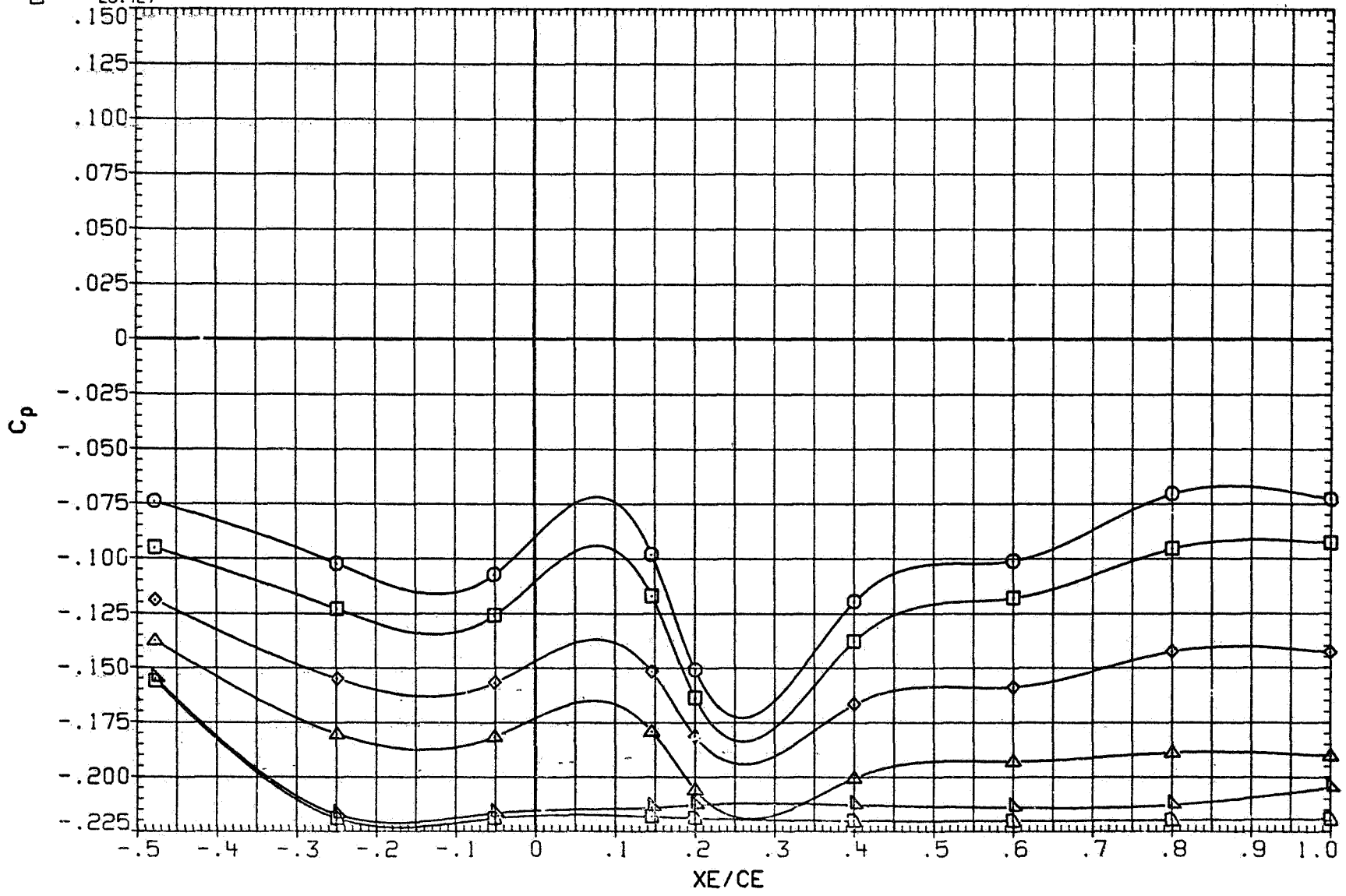


FIG.50 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

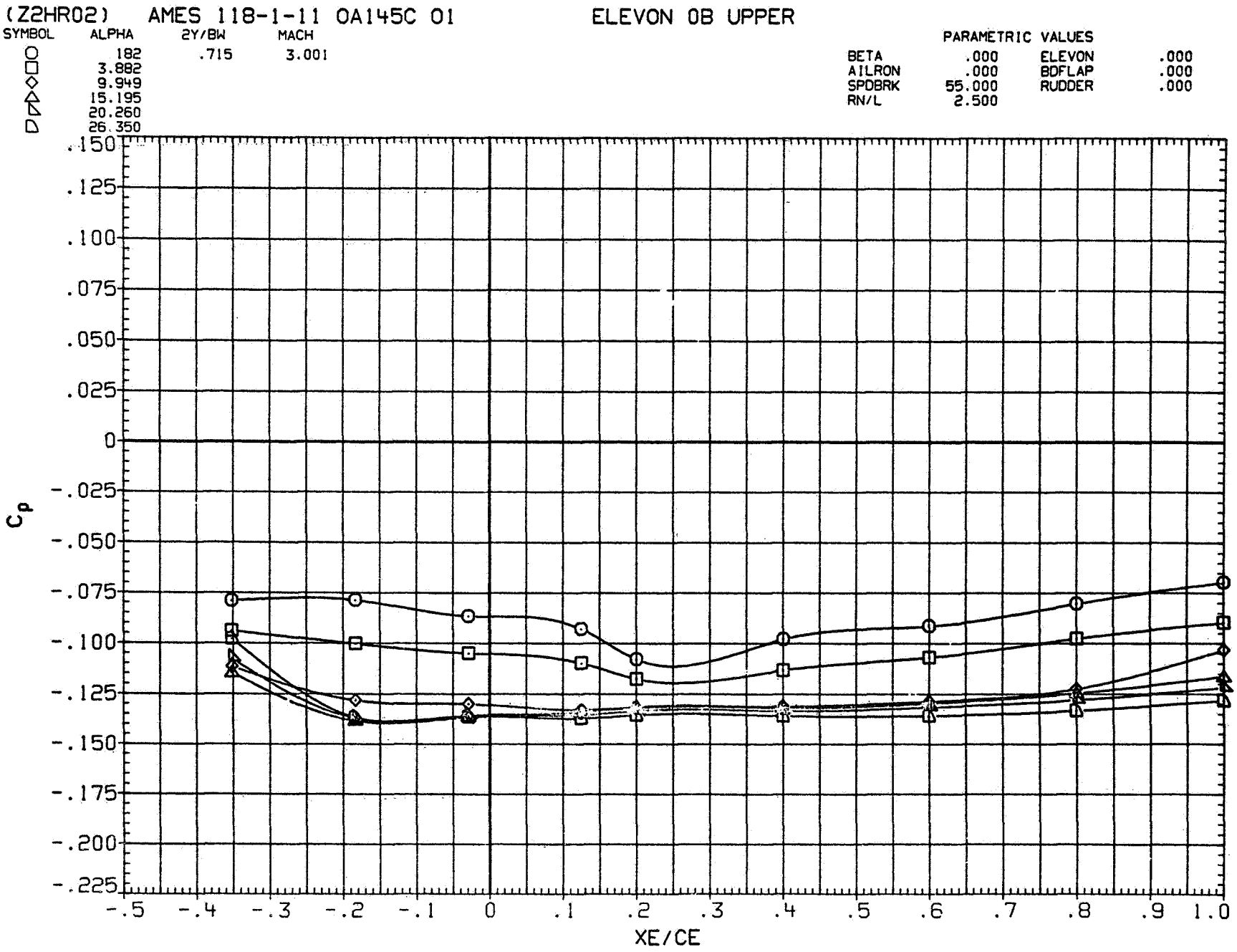


FIG.50 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

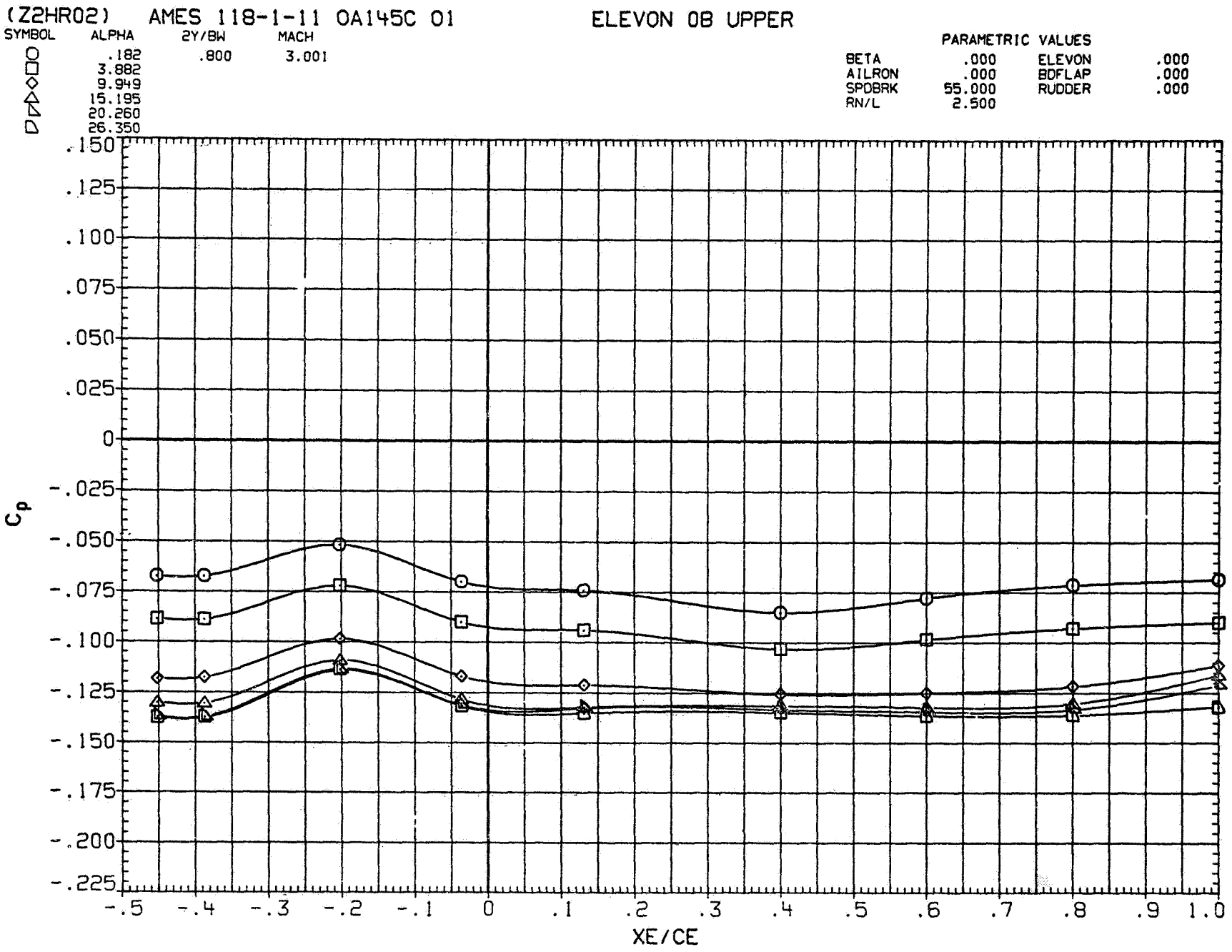


FIG.50 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

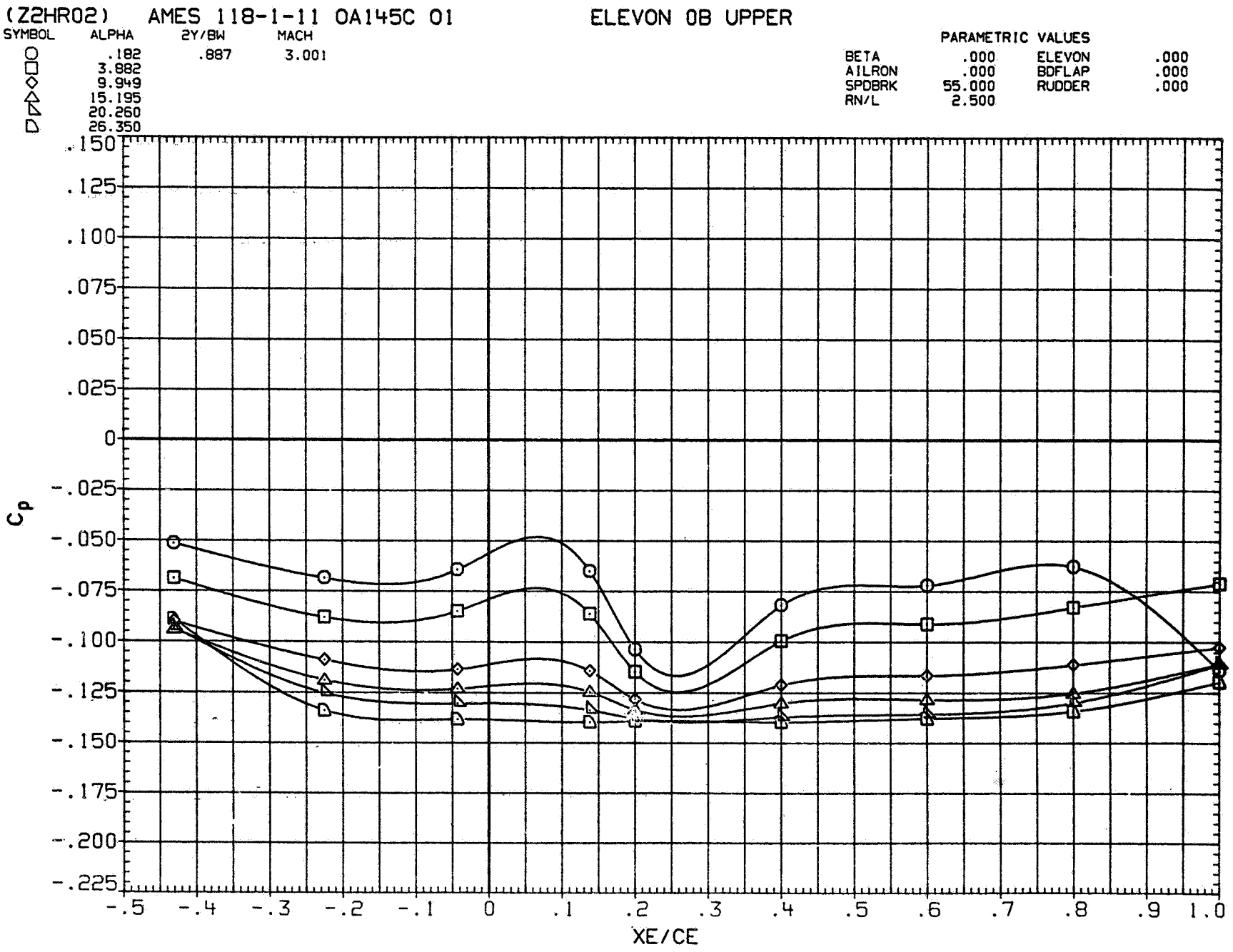


FIG.50 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

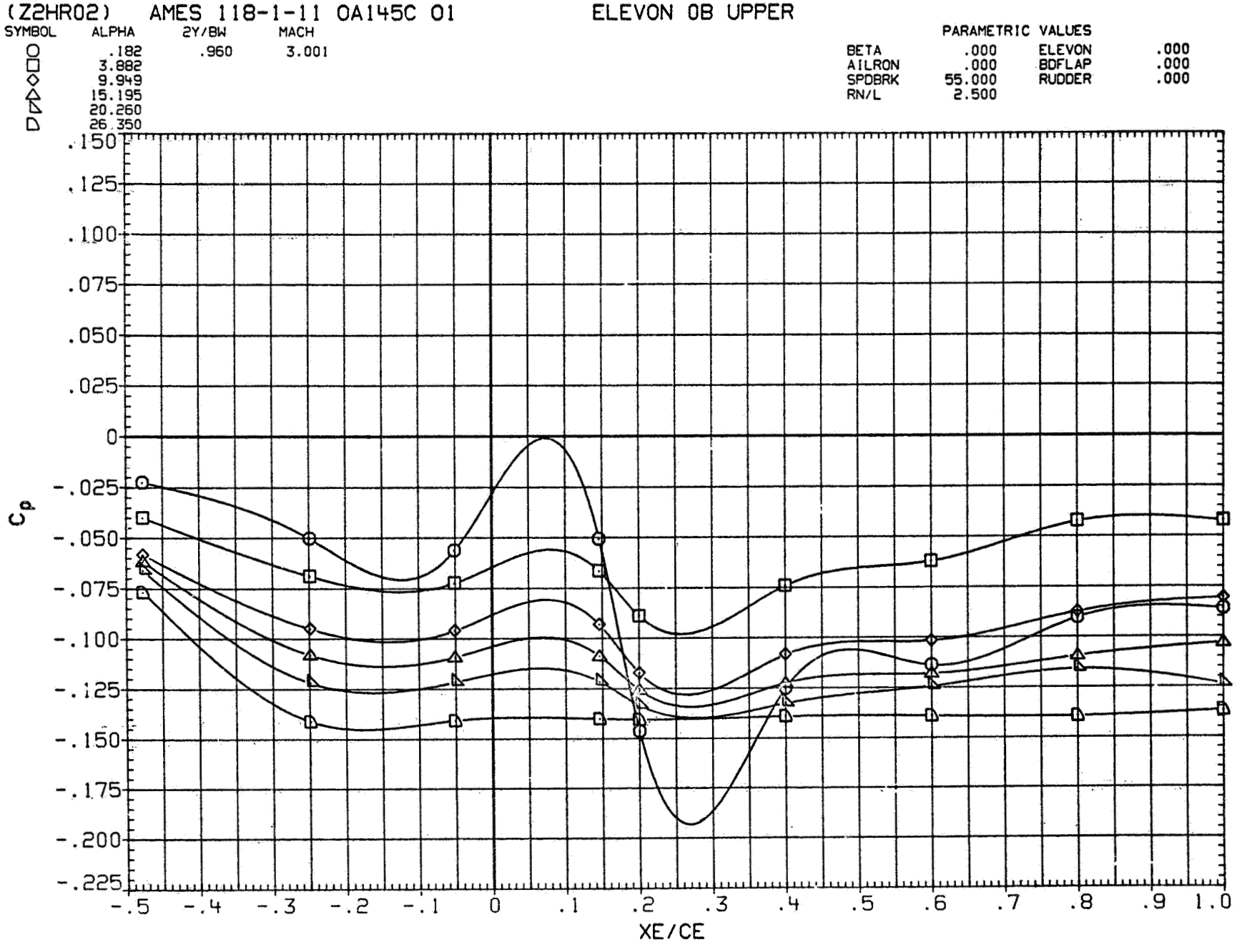


FIG.50 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(Z2HR02) AMES 118-1-11 OA145C 01 ELEVON OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.020	.715	3.498
□	4.642		
◇	9.674		
◁	14.765		
△	19.824		
▷	25.034		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

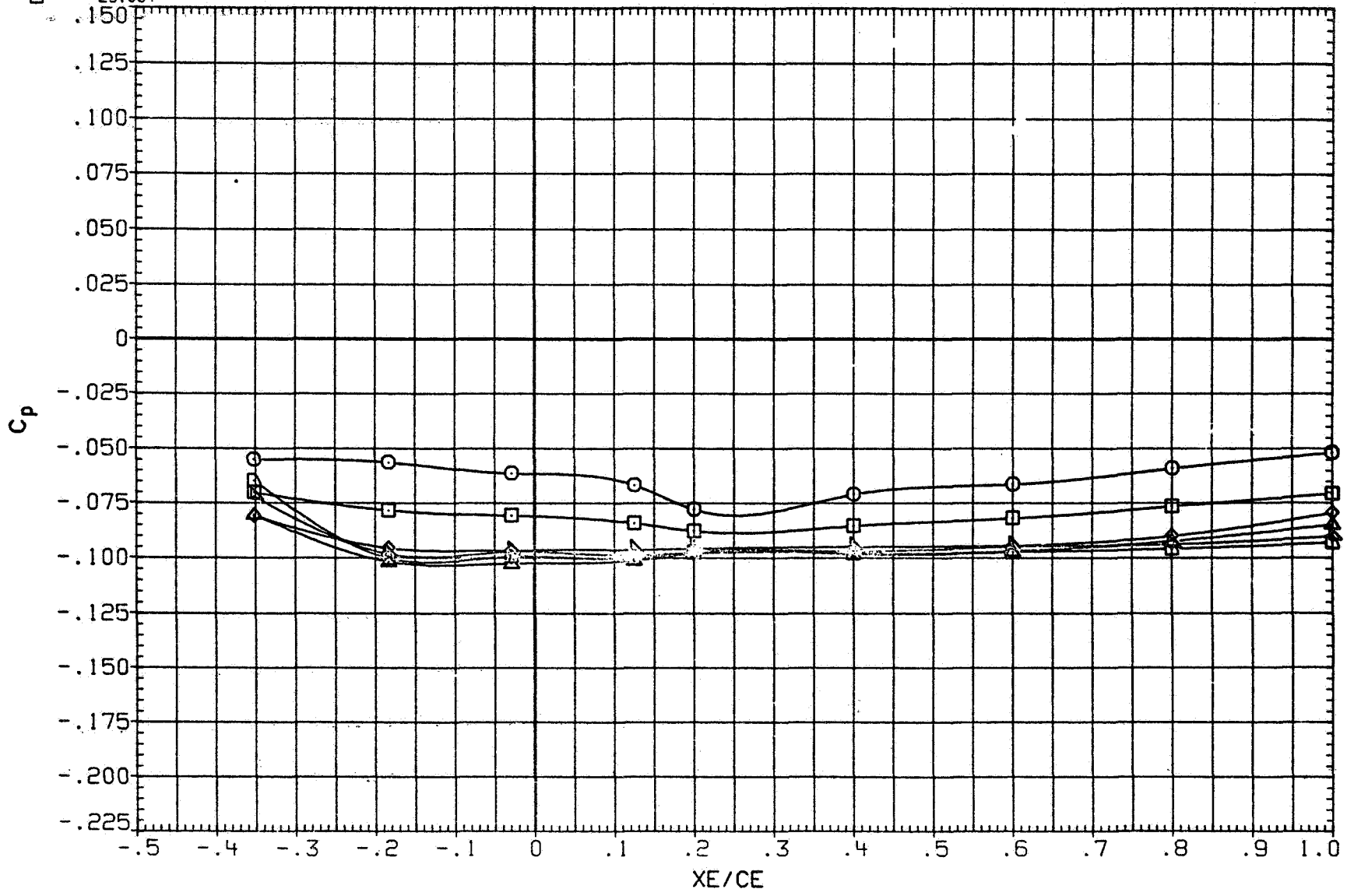


FIG.50 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

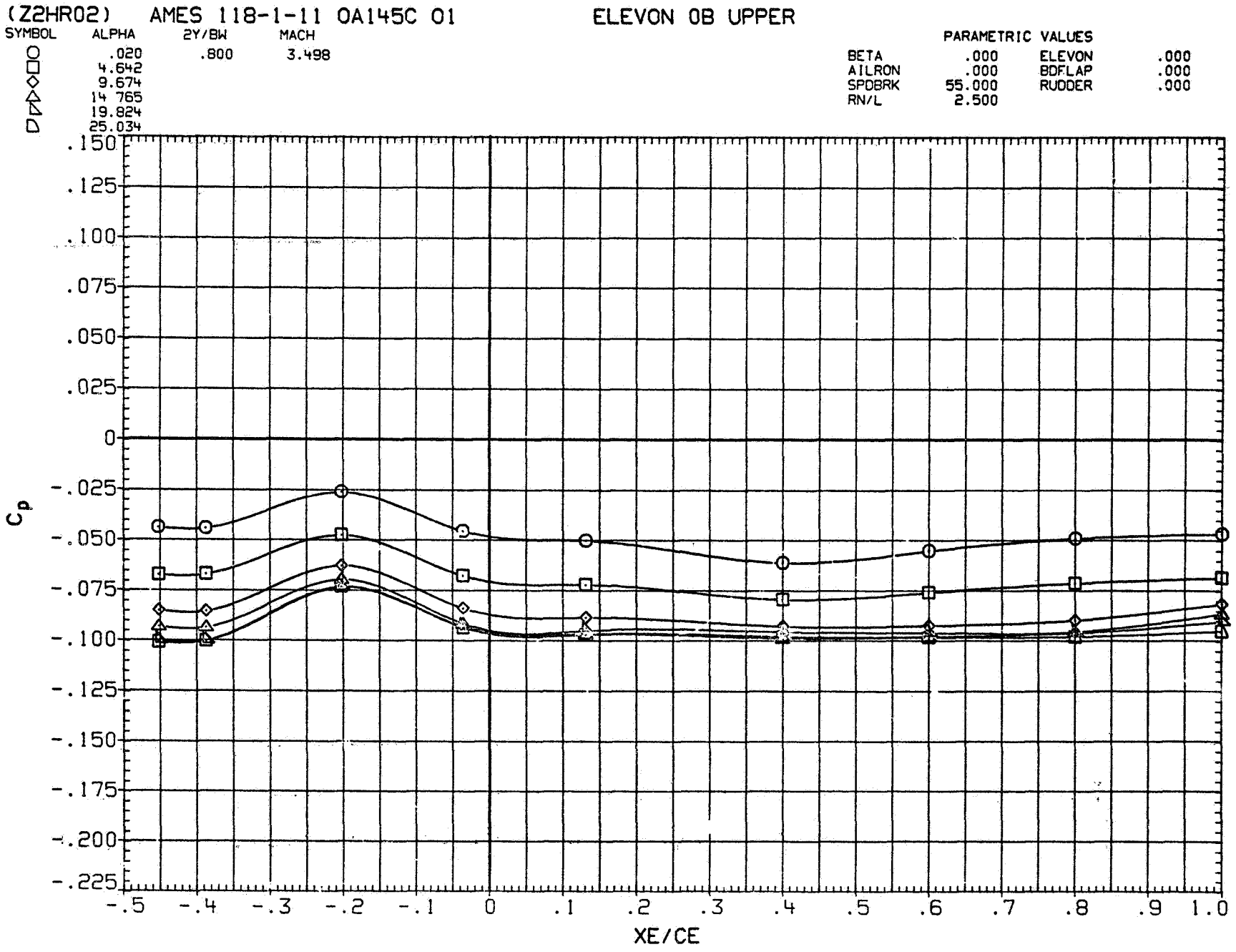


FIG.50 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

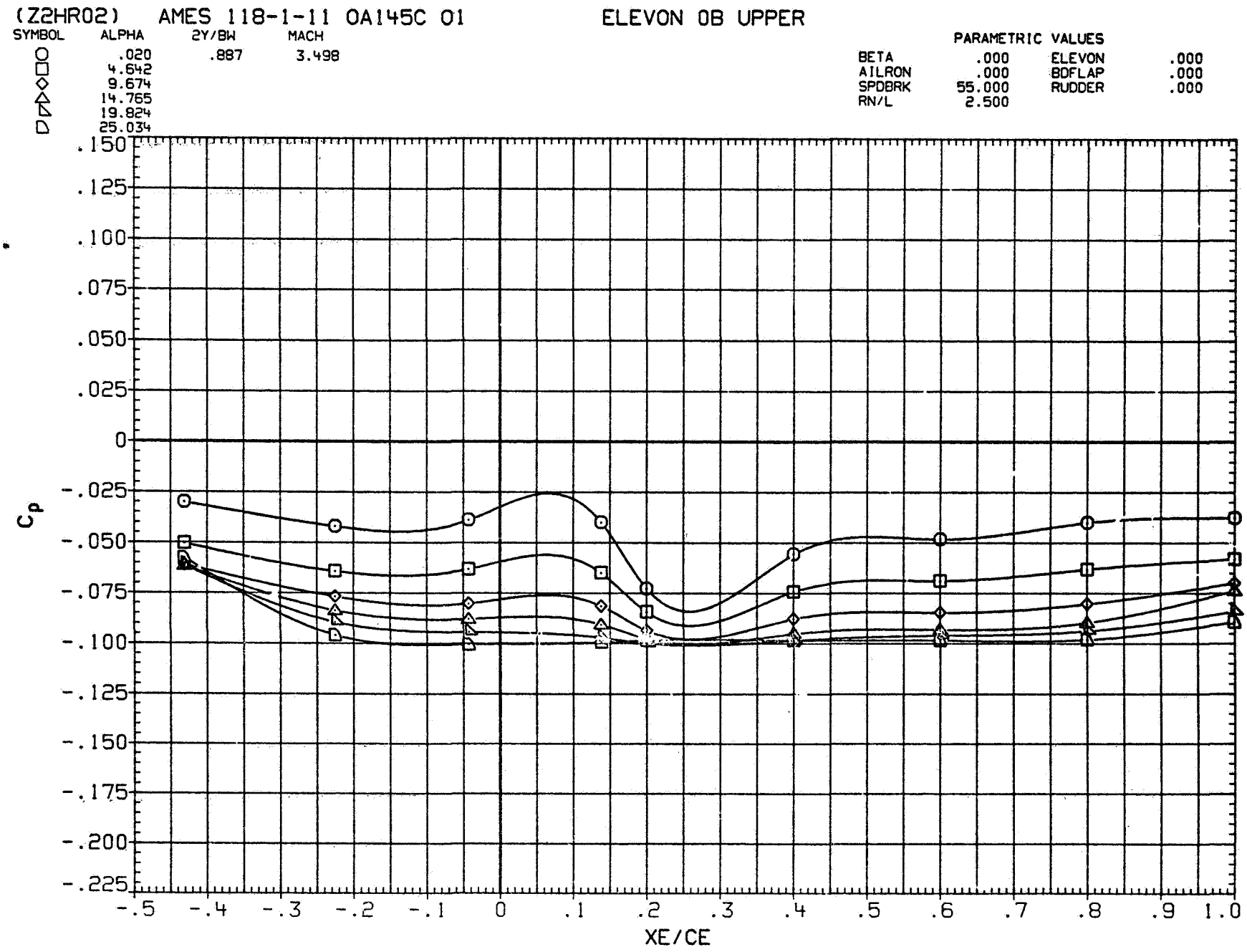


FIG.50 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

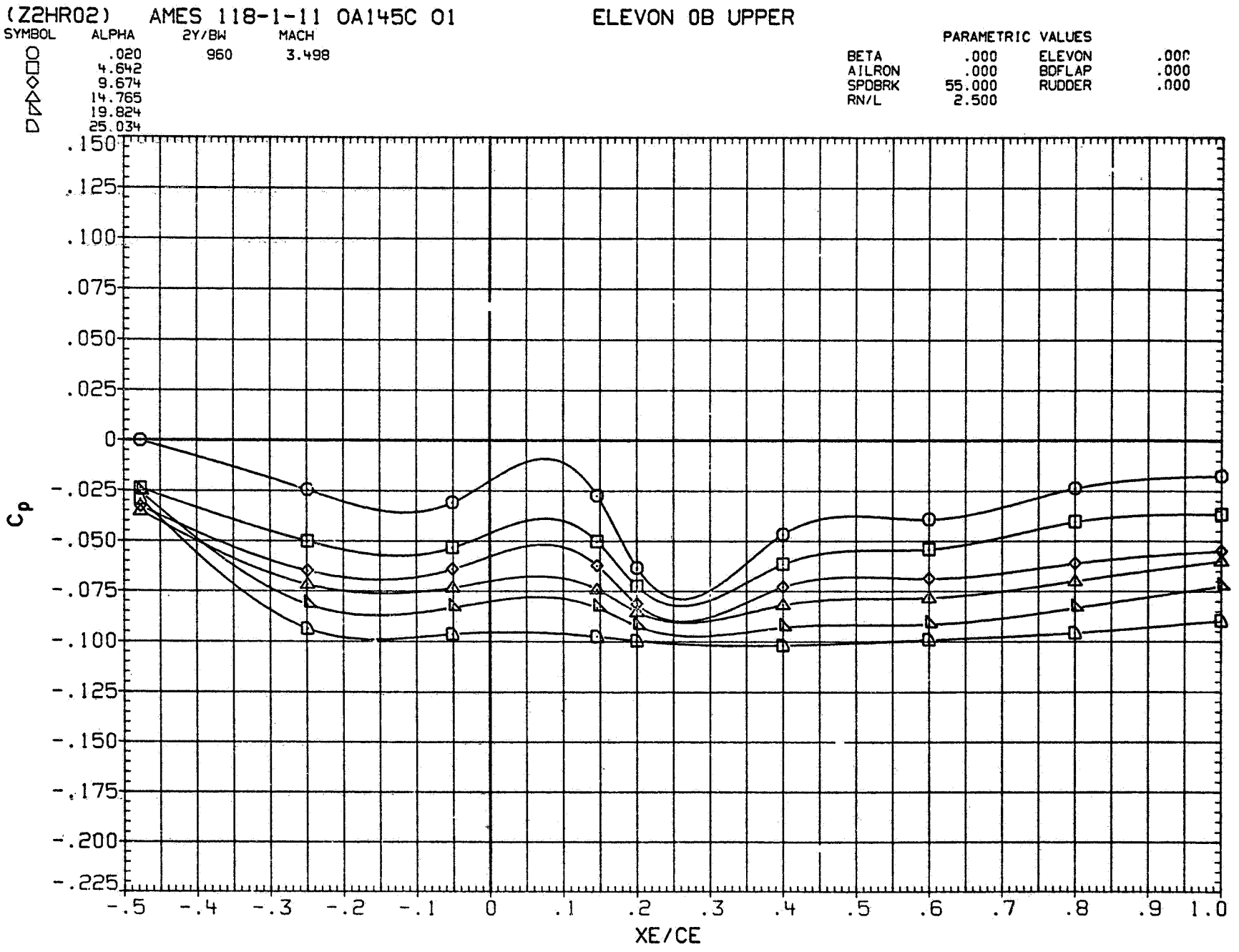


FIG.50 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

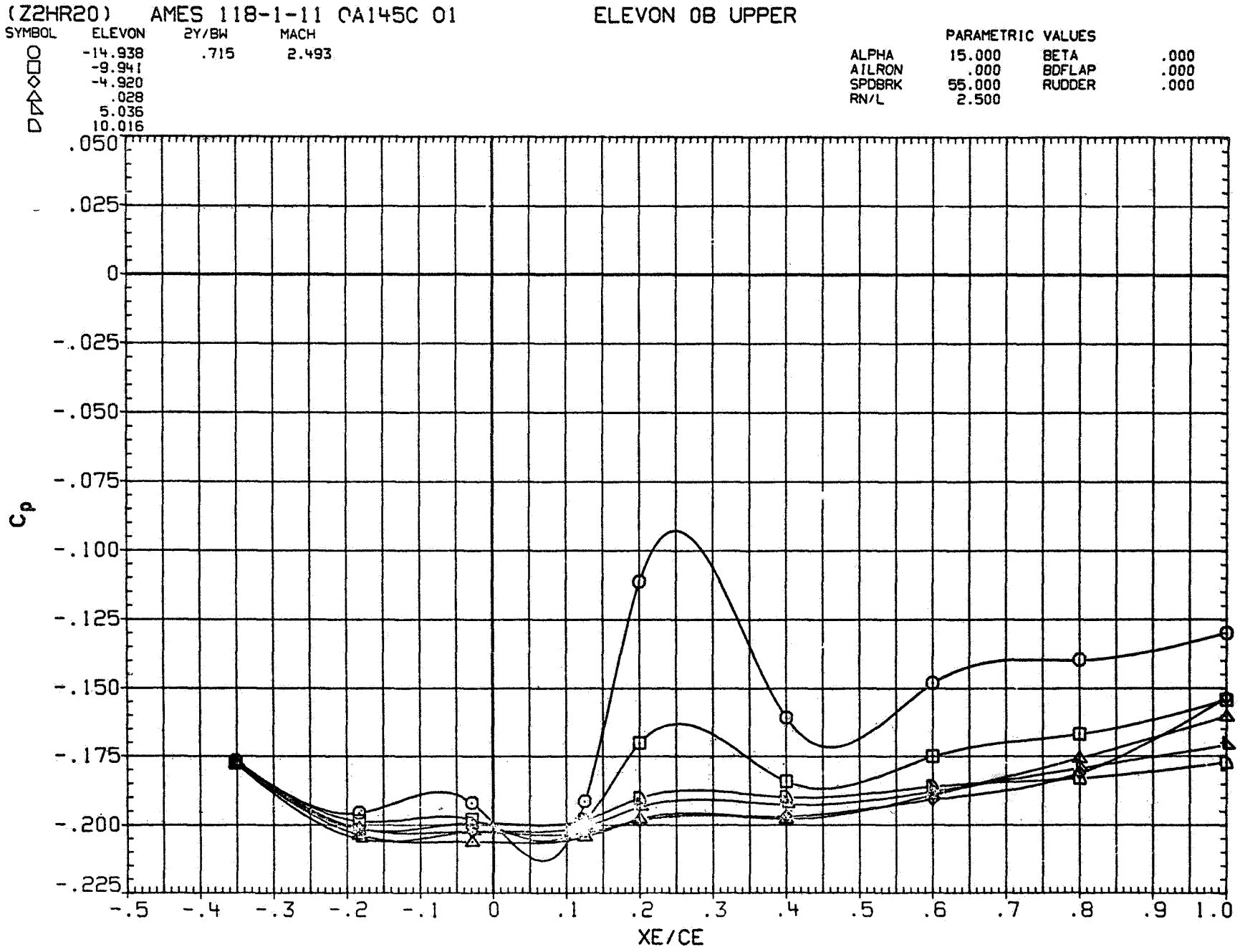


FIG.51 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

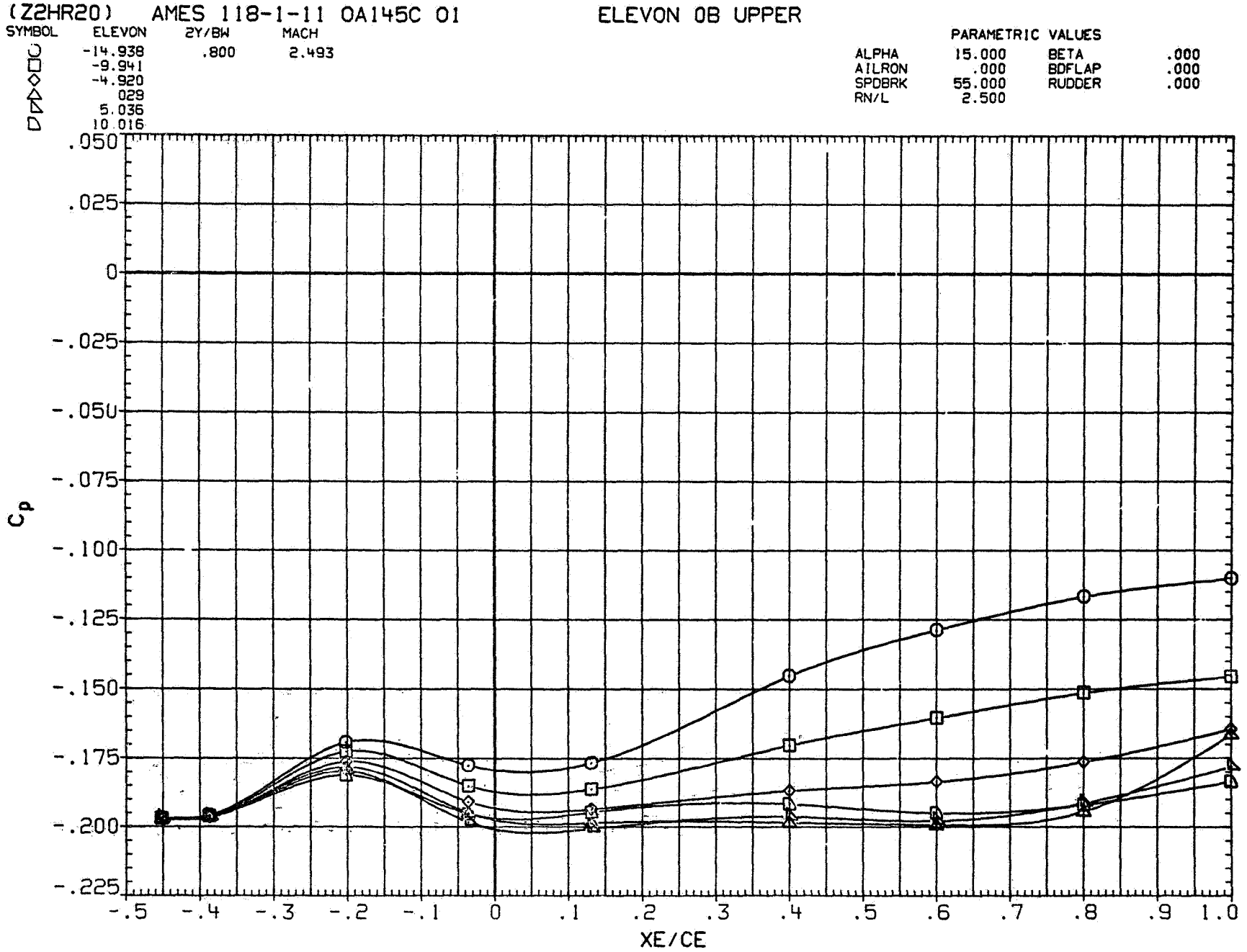


FIG.51 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

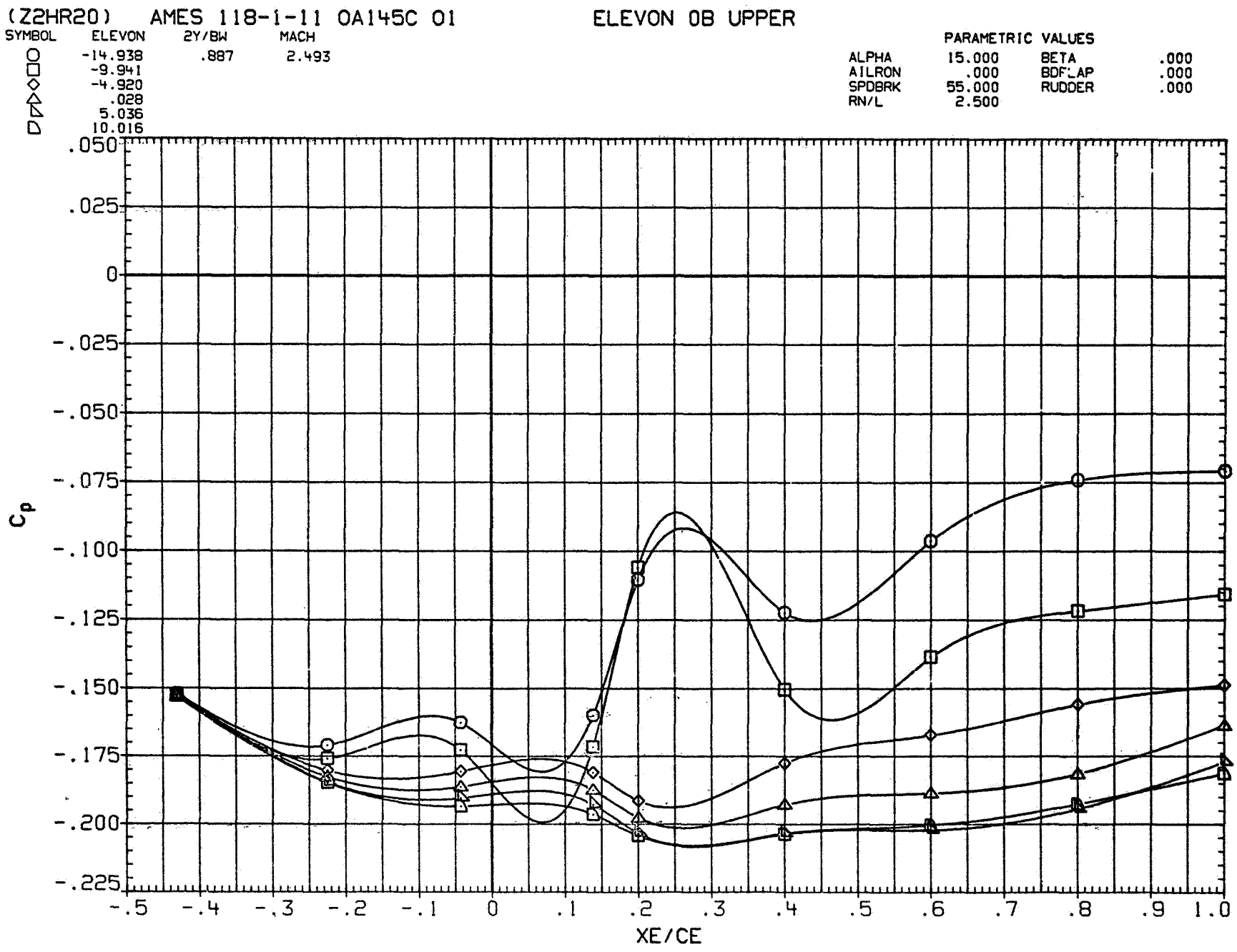


FIG.51 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

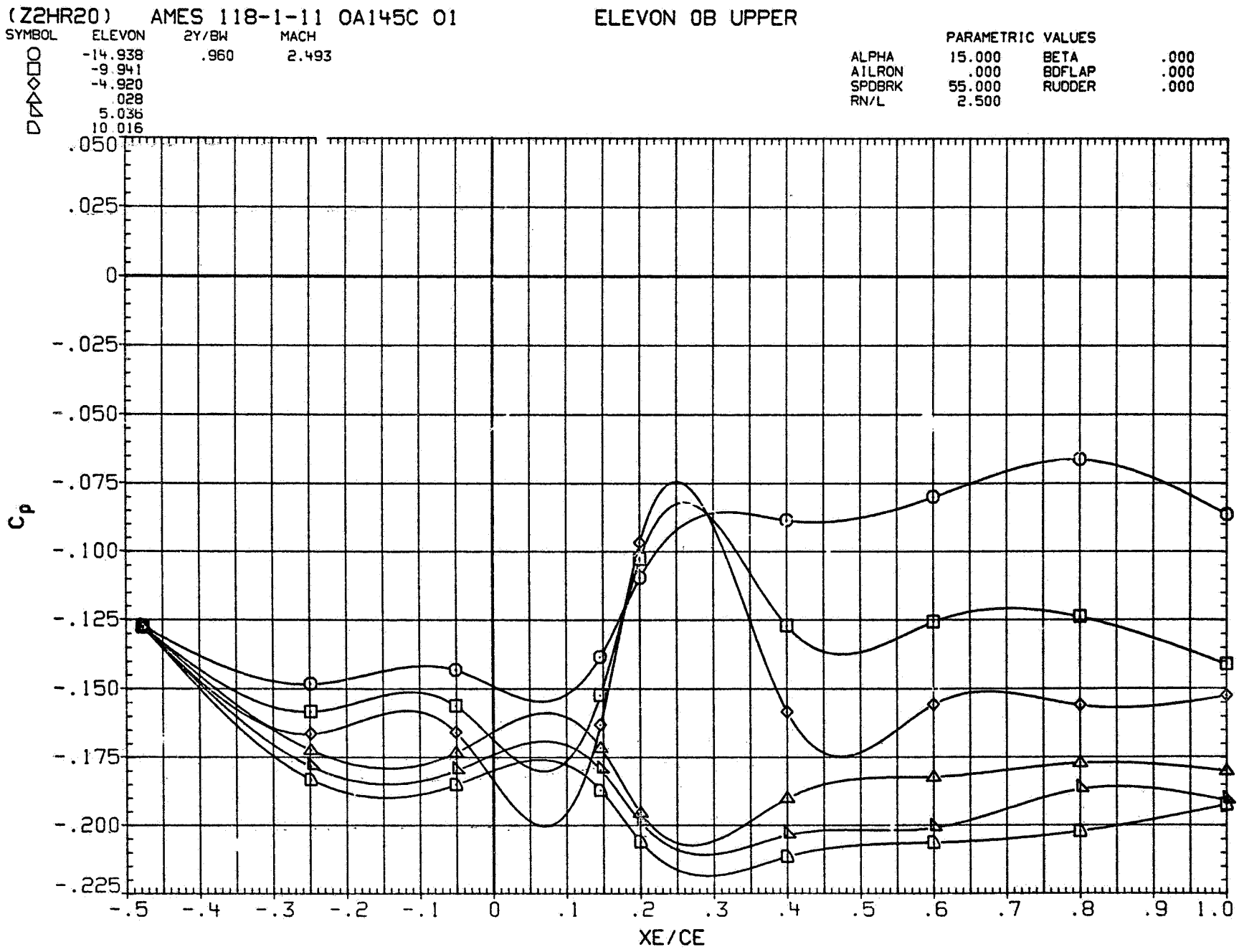


FIG.51 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

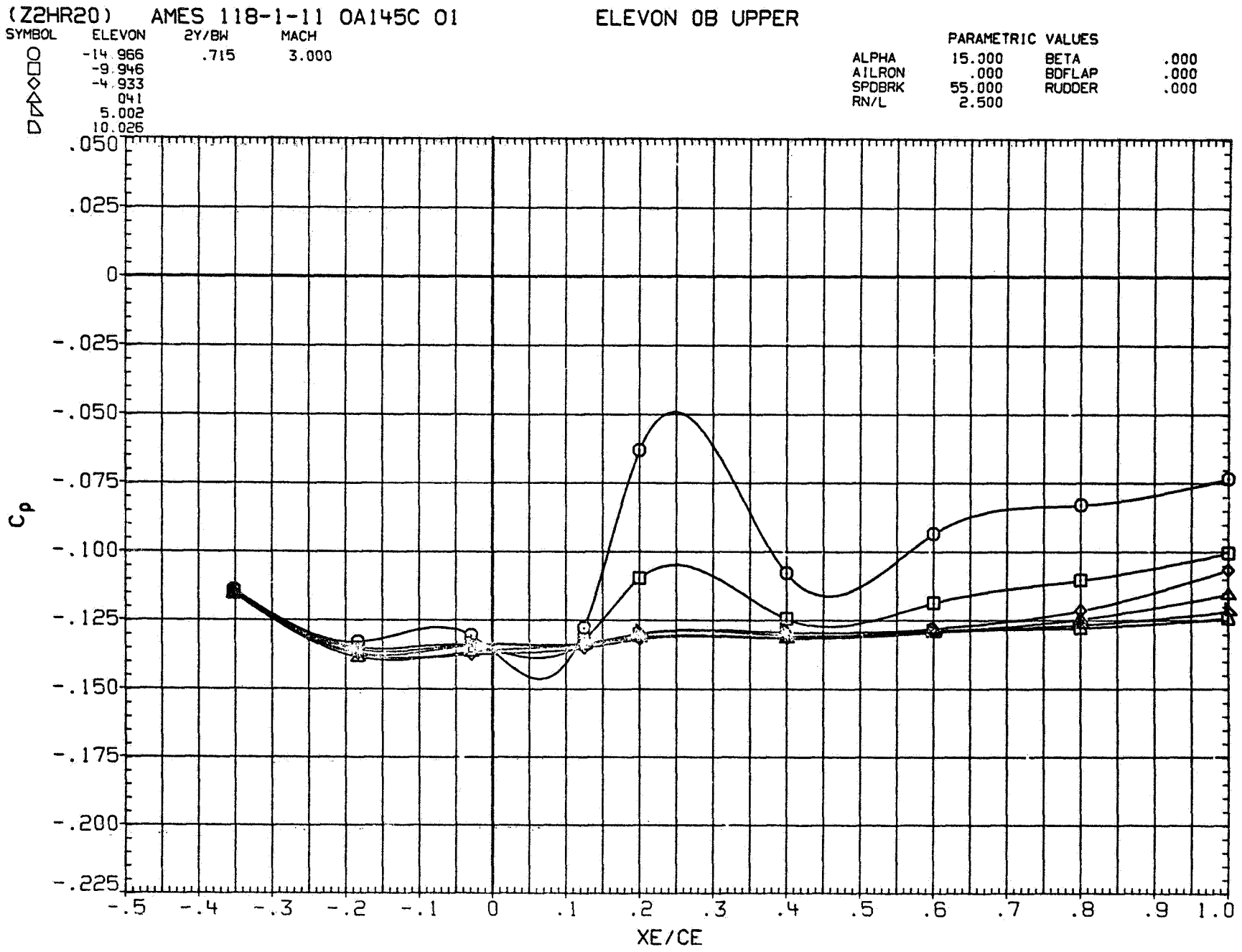


FIG.51 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

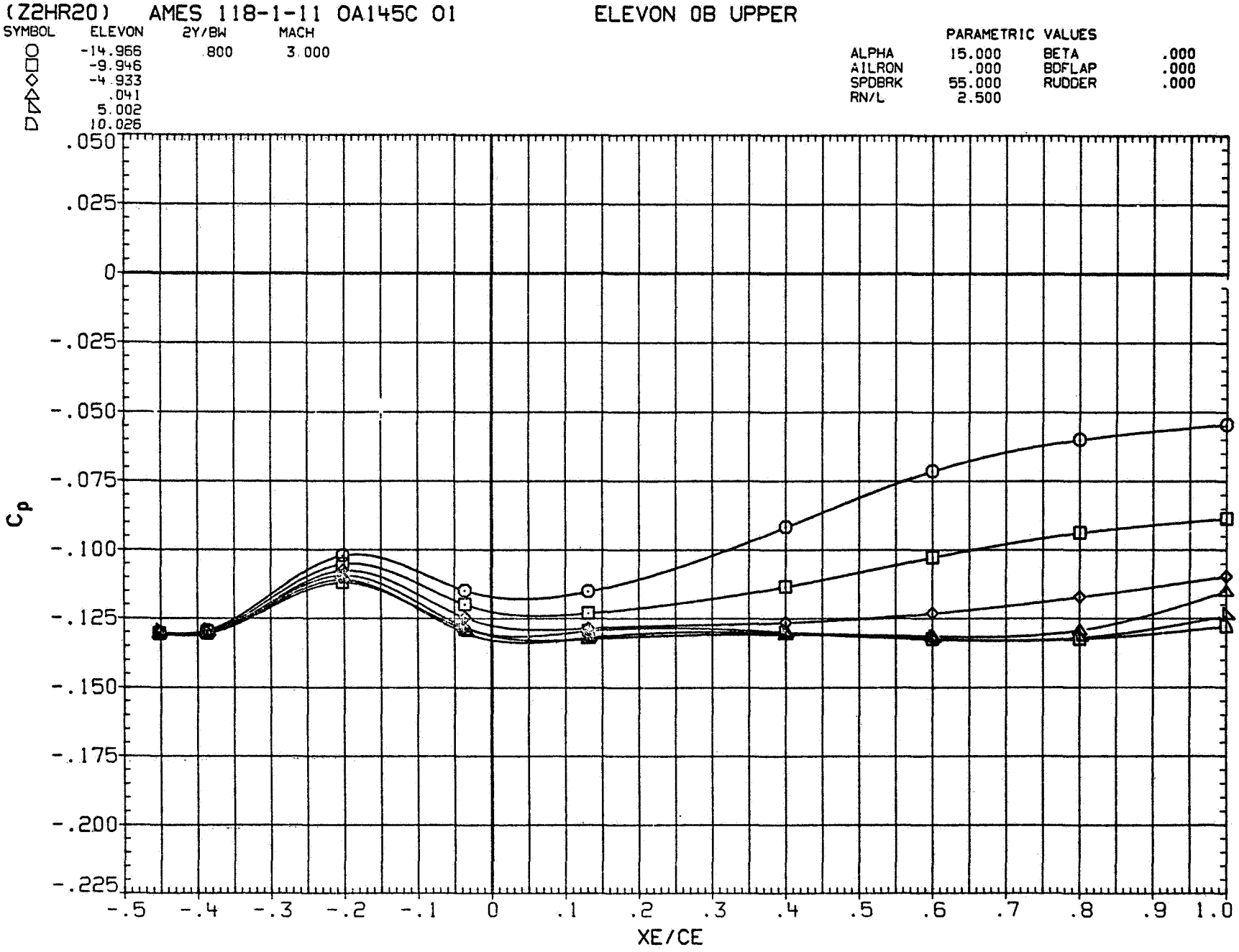


FIG.51 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

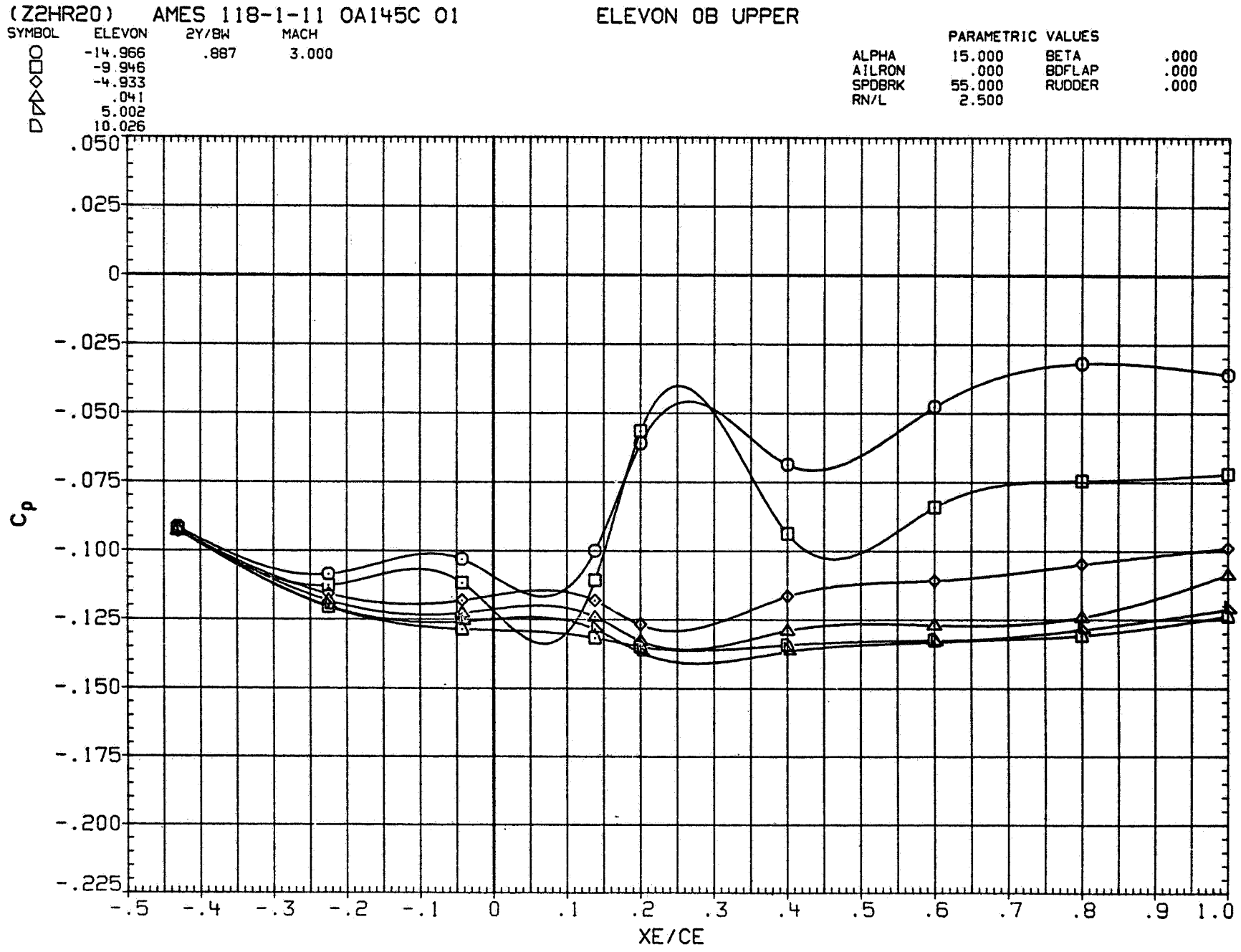


FIG.51 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

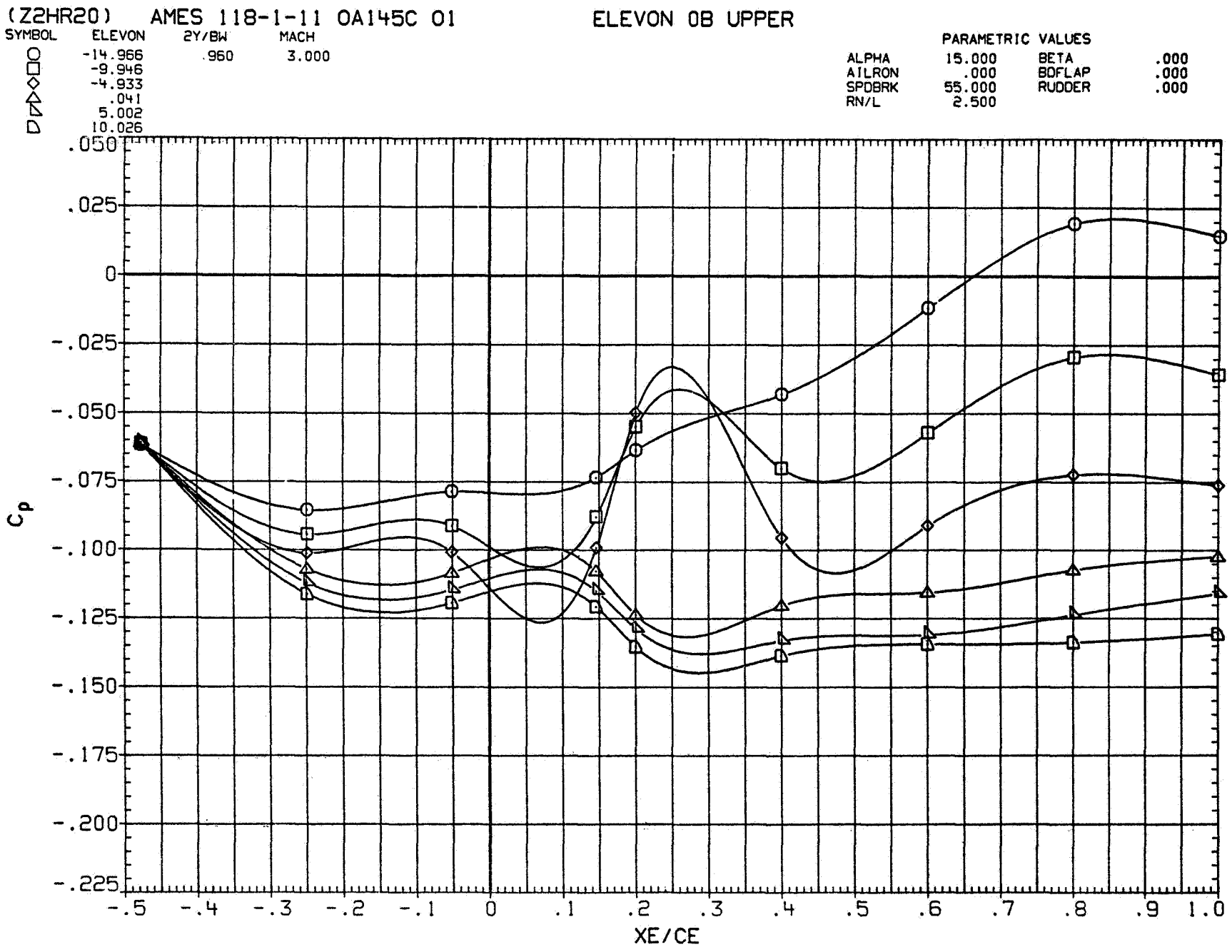


FIG.51 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

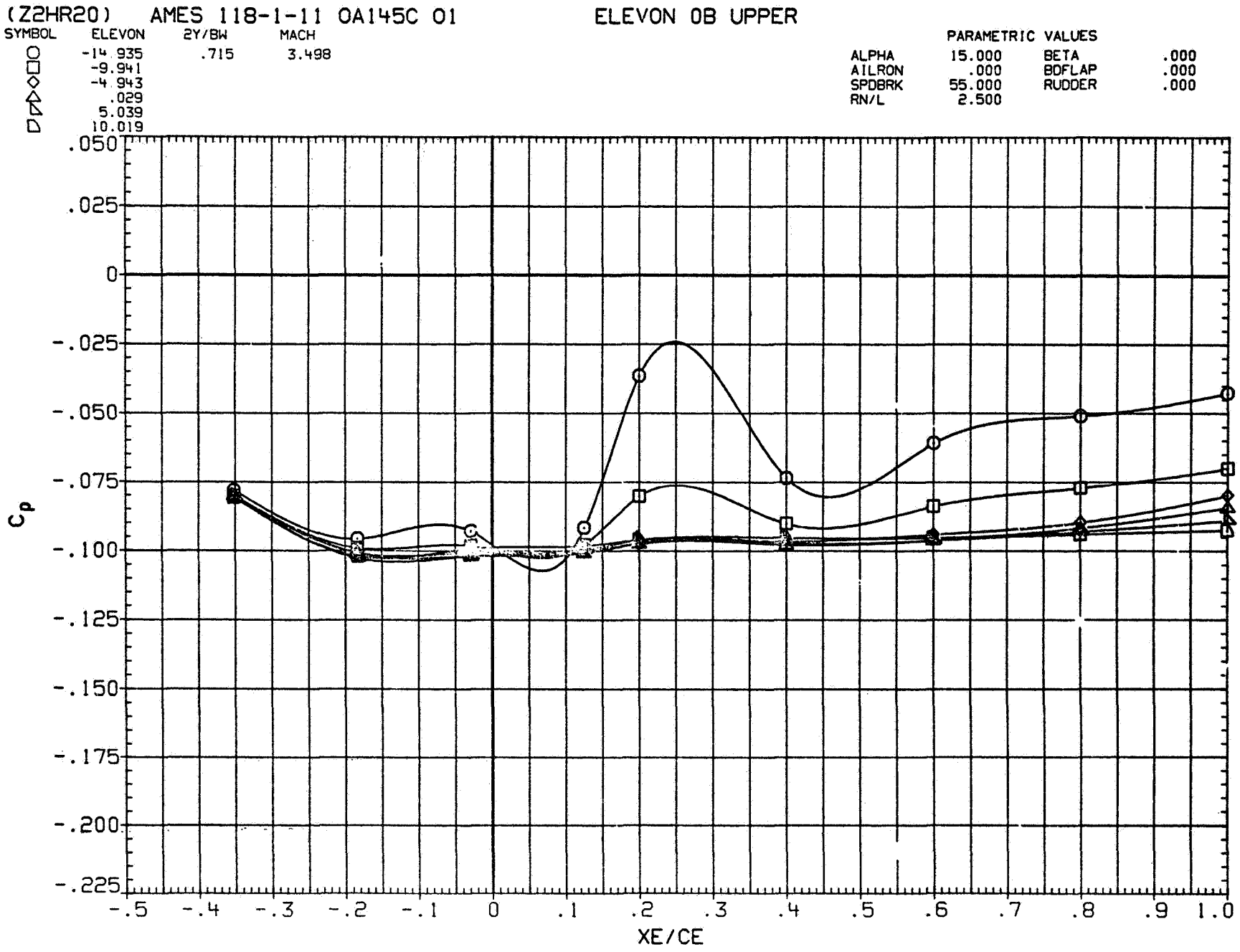


FIG.51 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

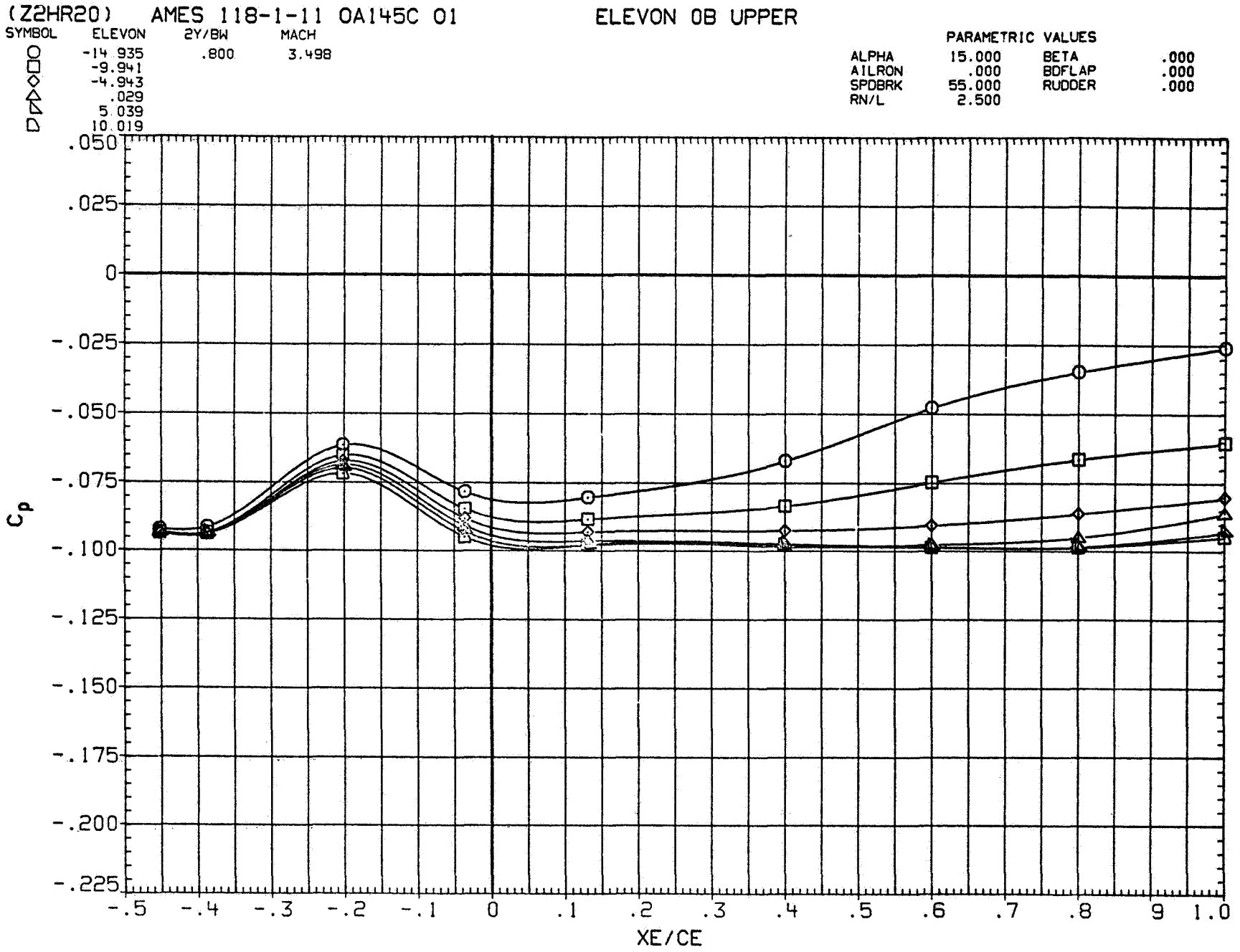


FIG.51 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

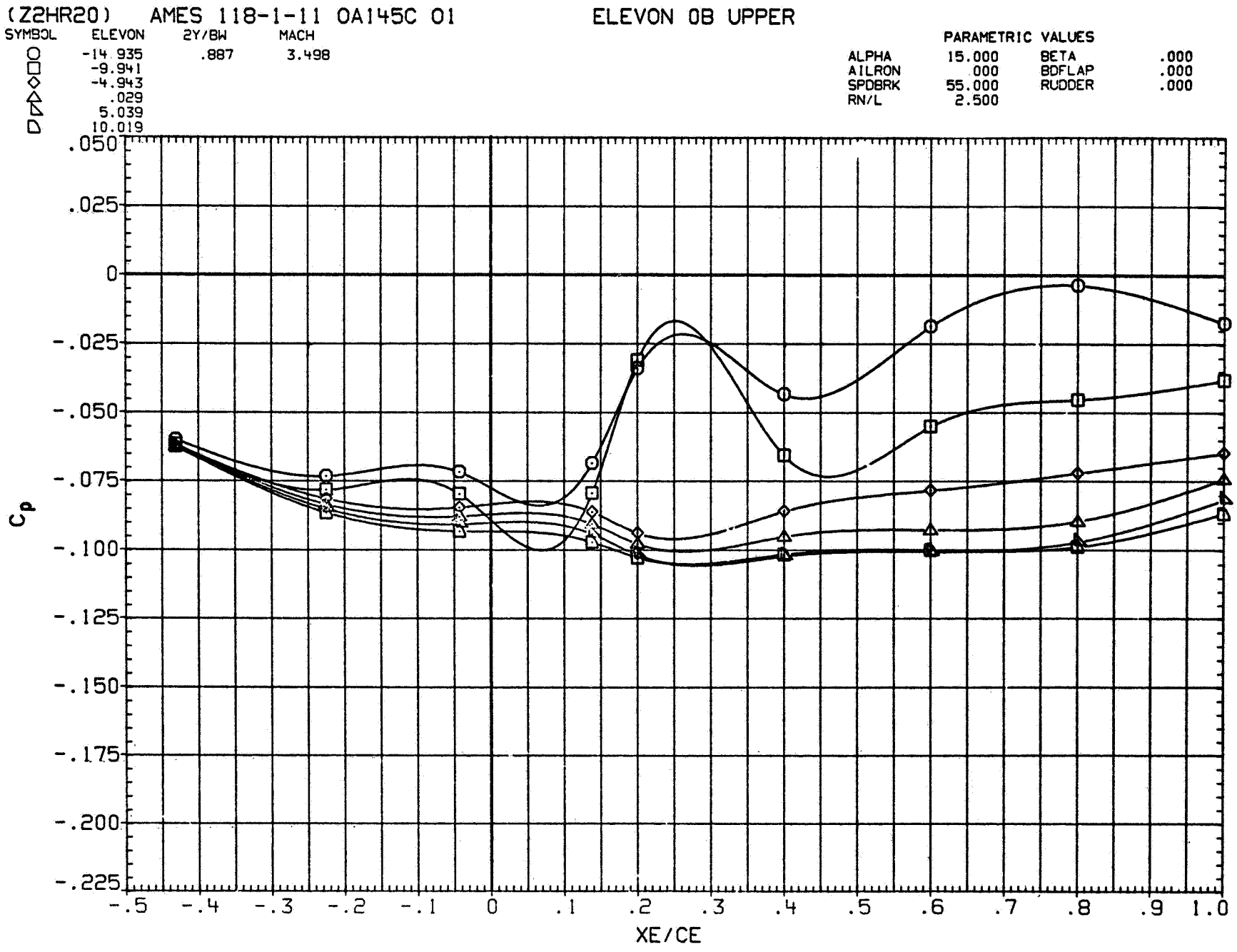


FIG.51 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

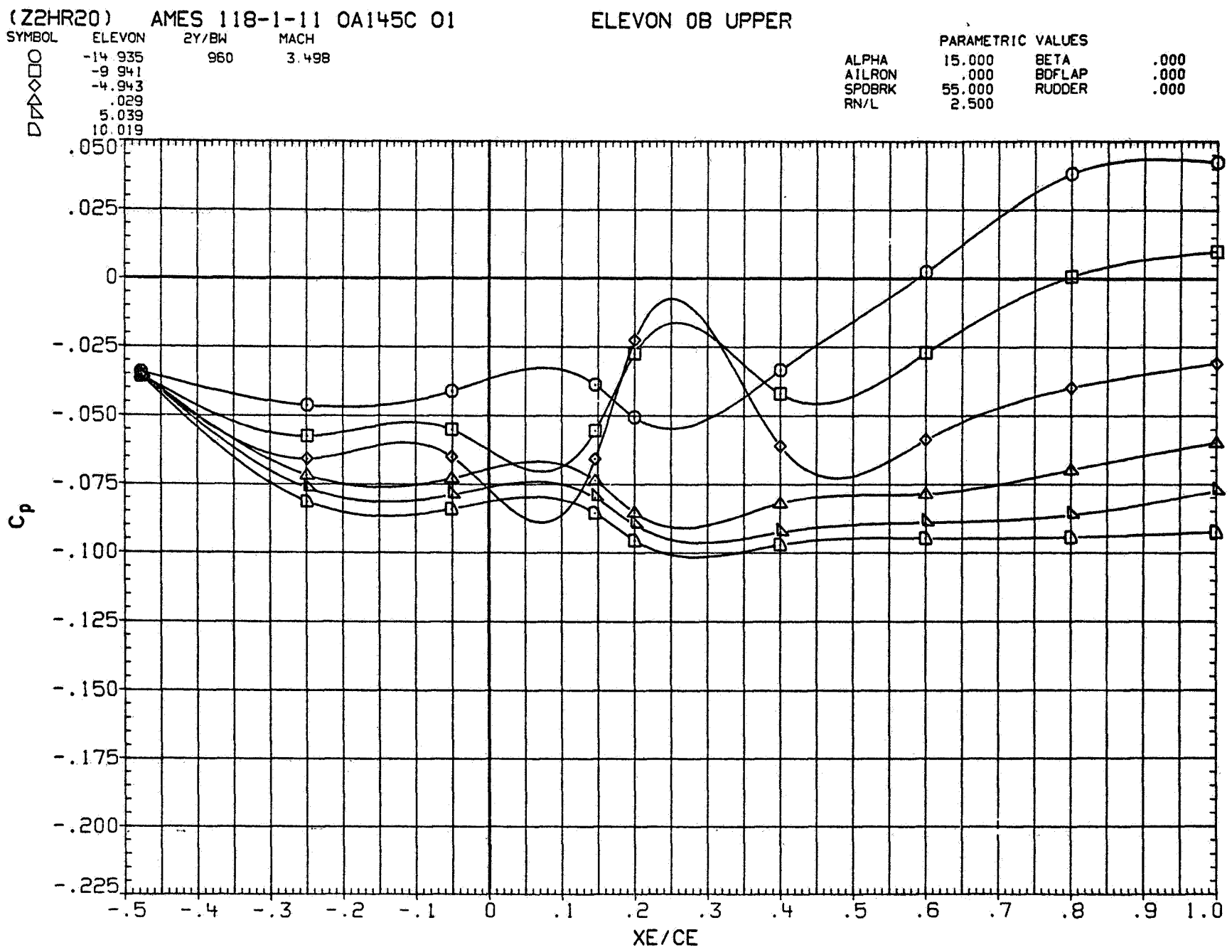


FIG.51 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

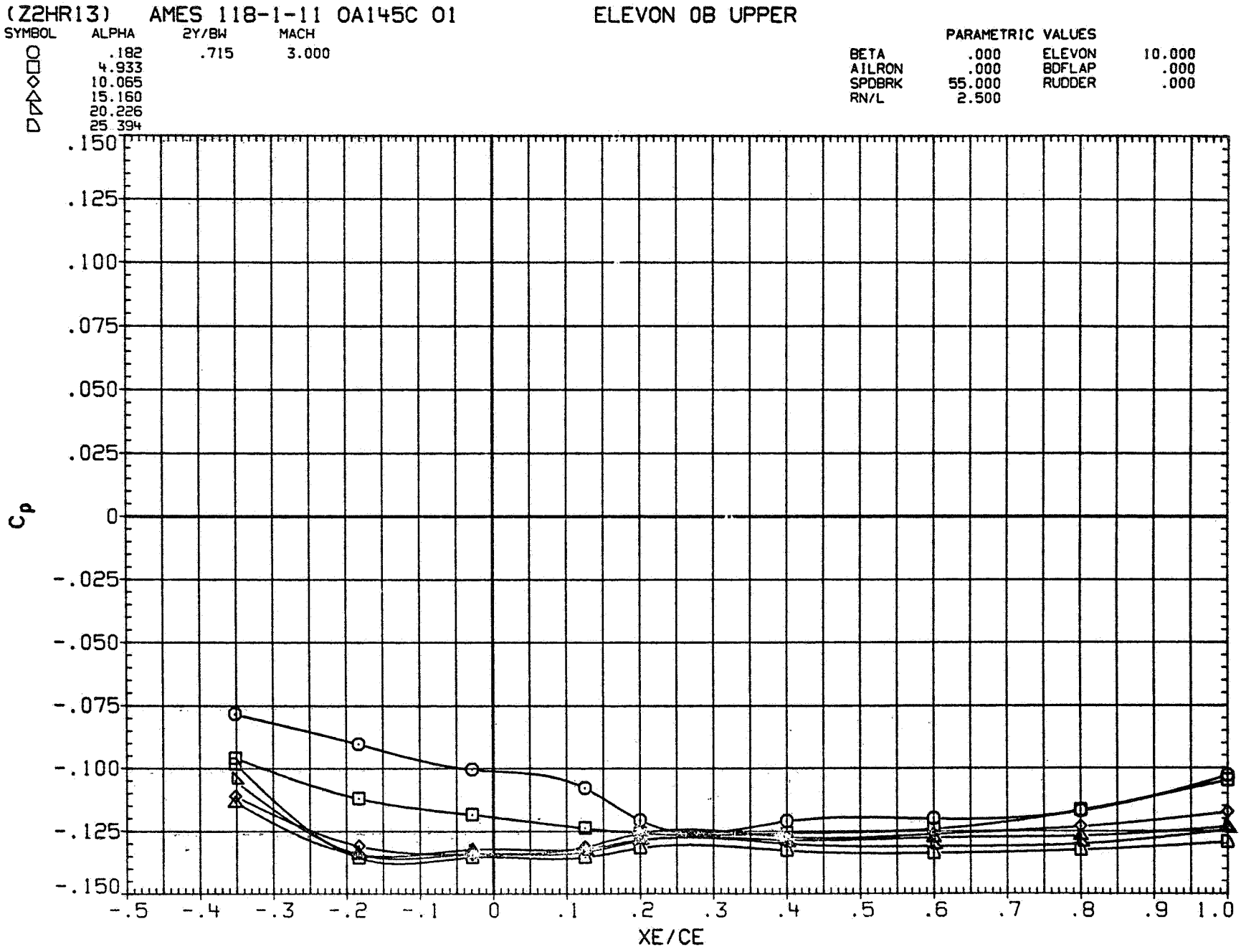


FIG.52 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

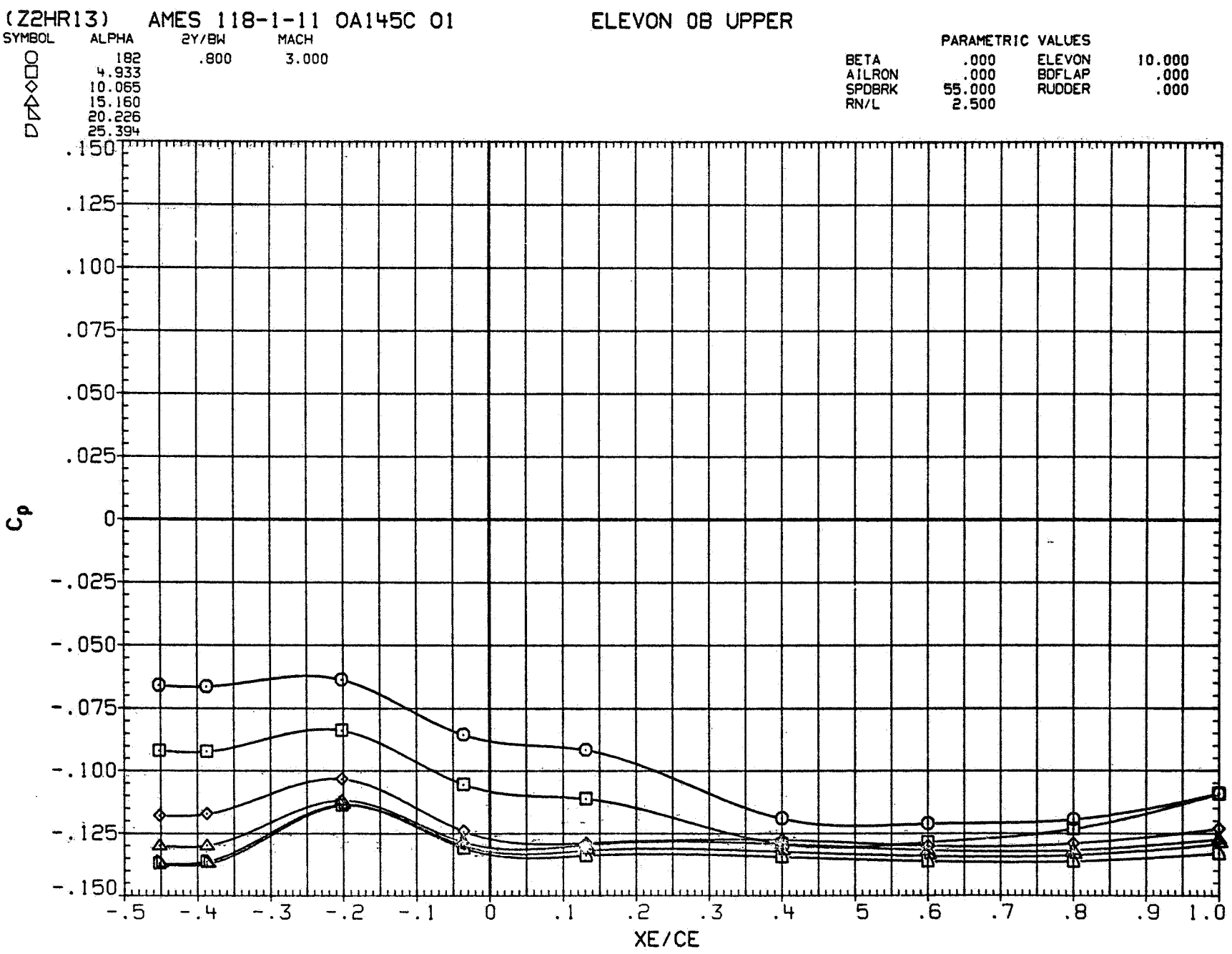


FIG.52 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

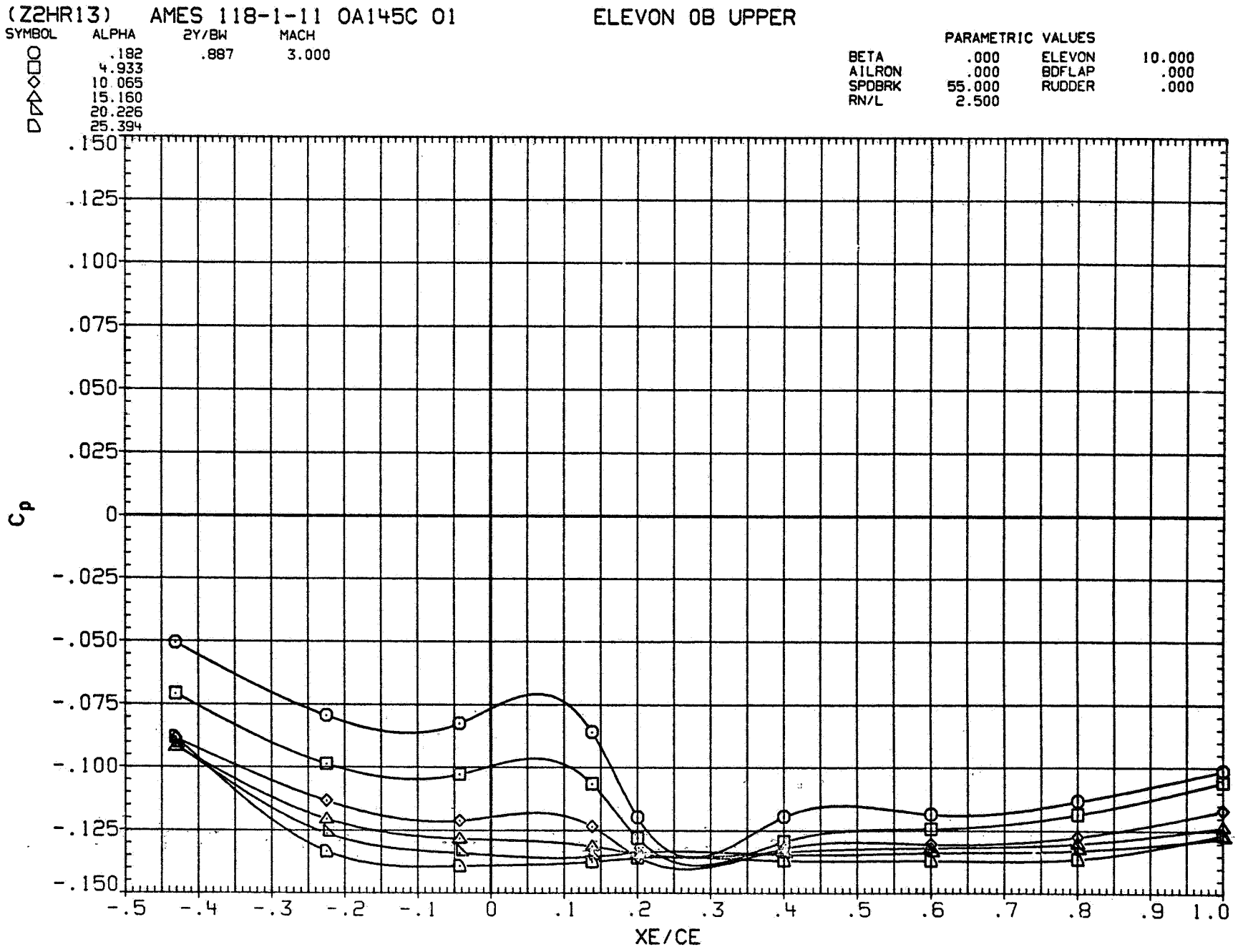


FIG.52 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

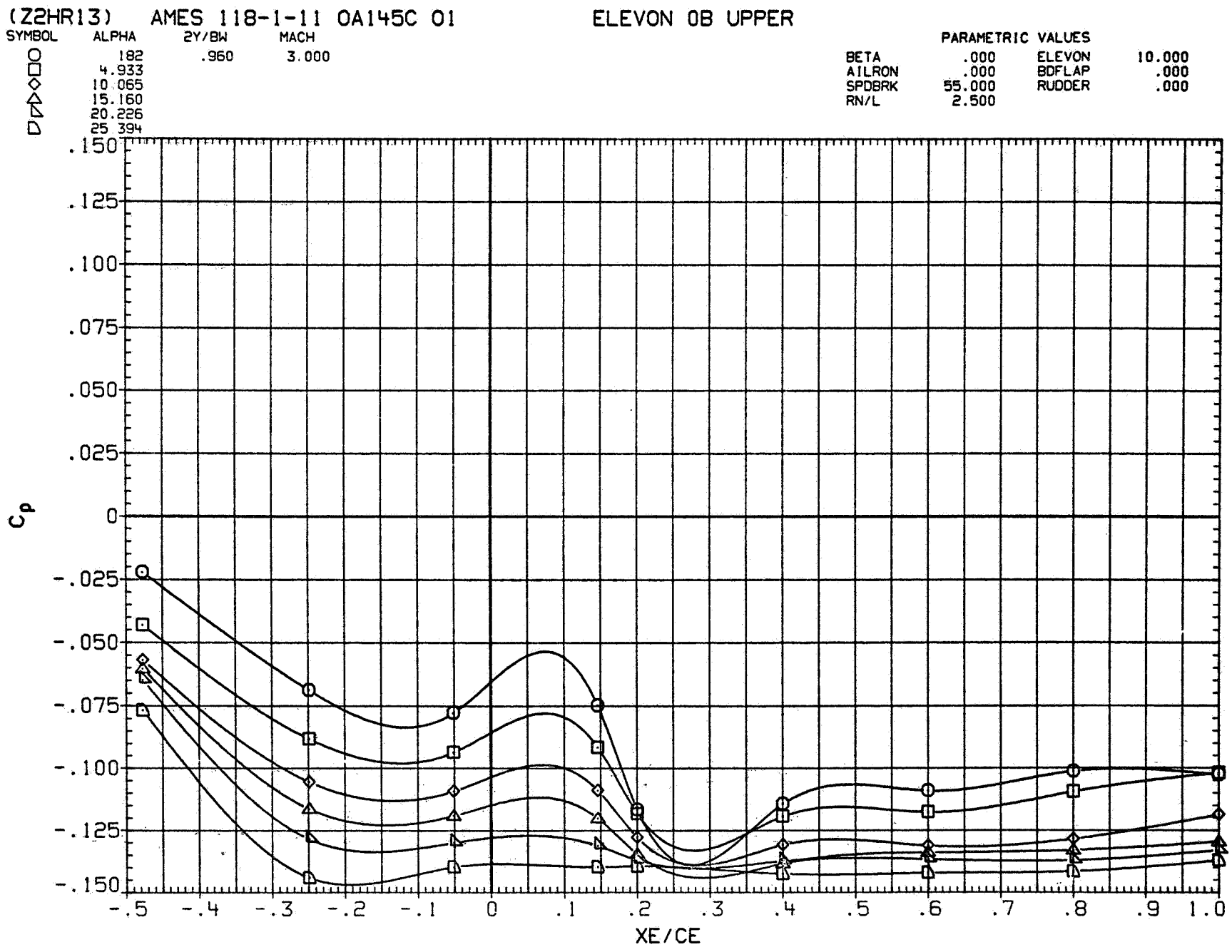


FIG.52 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

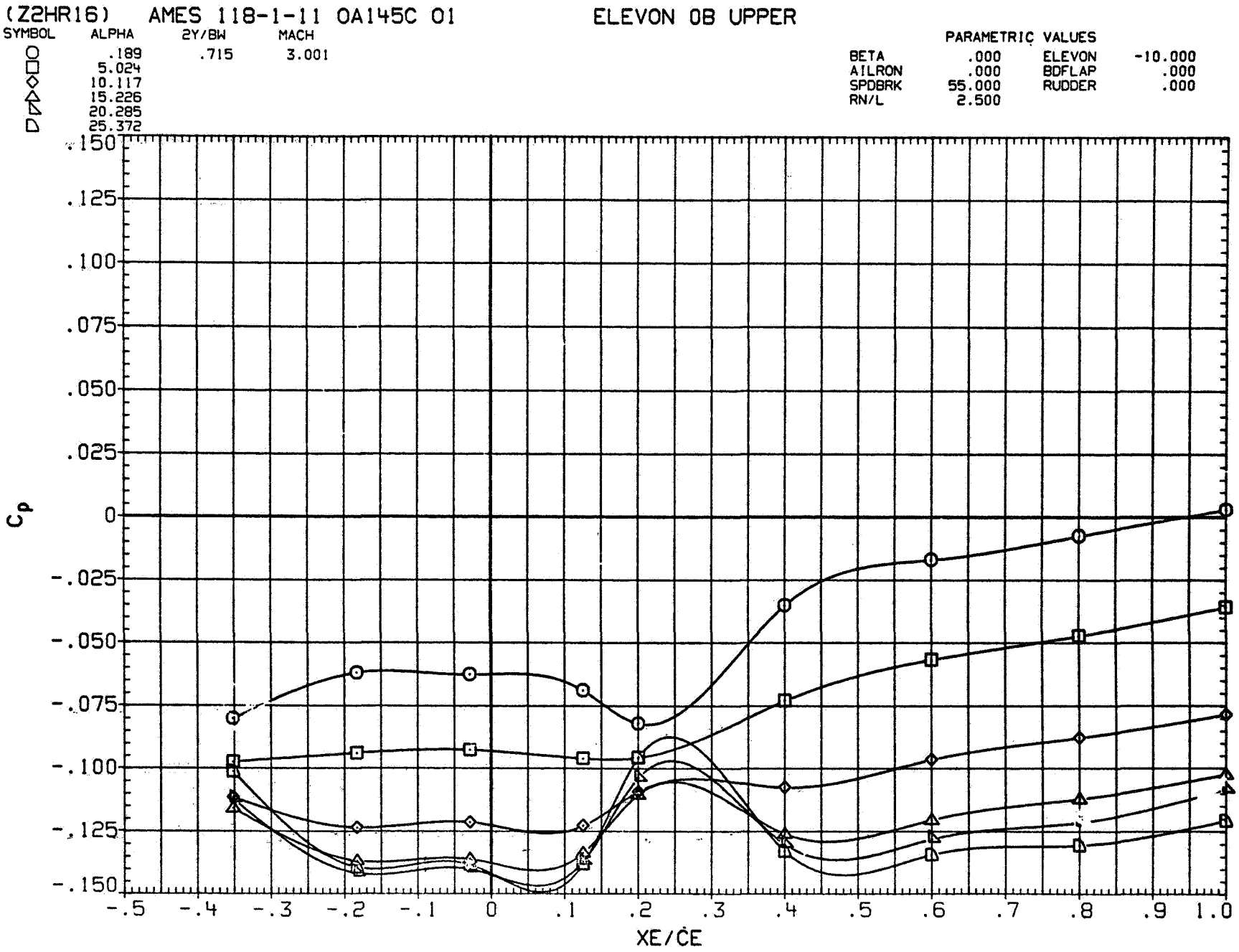


FIG.53 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

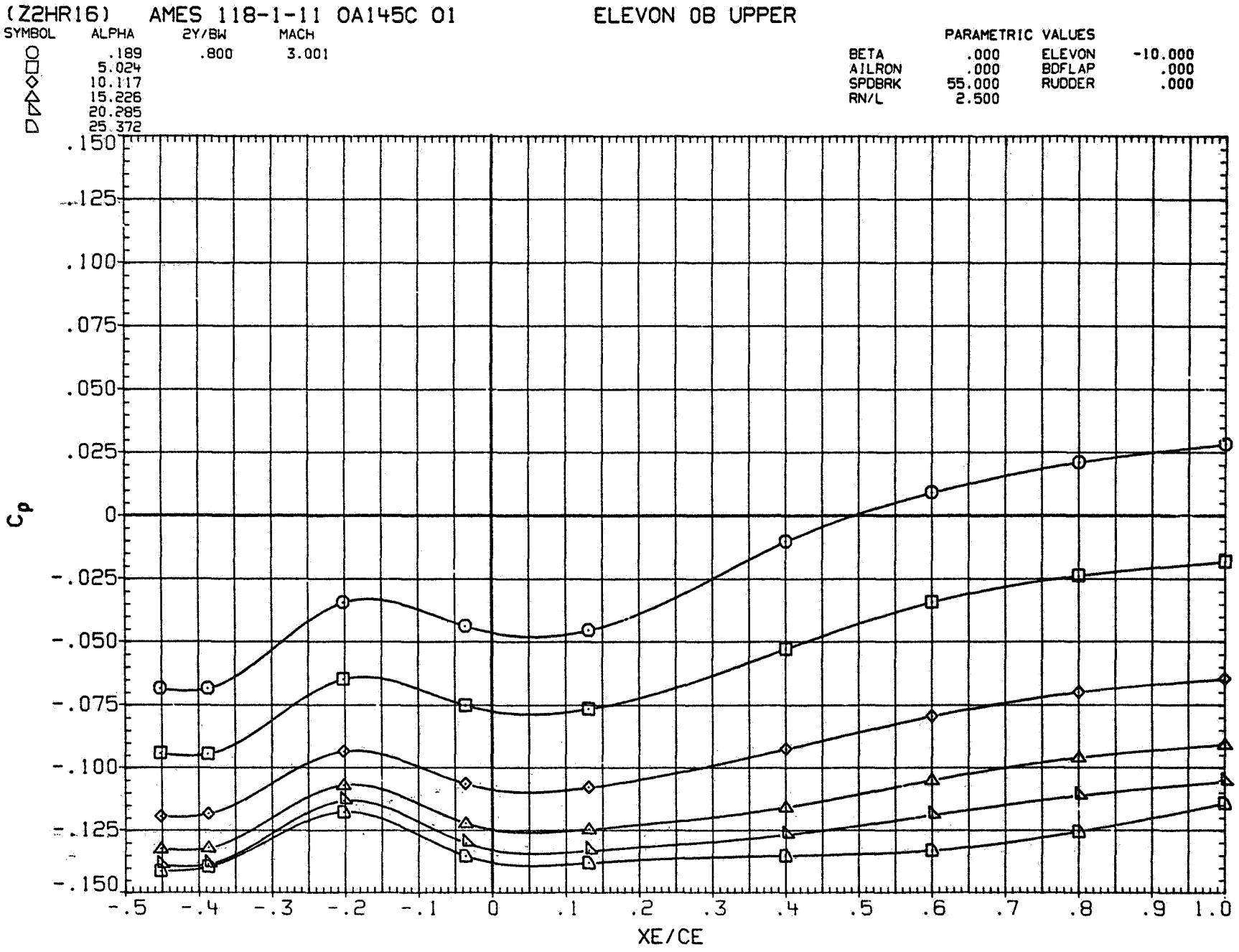


FIG.53 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

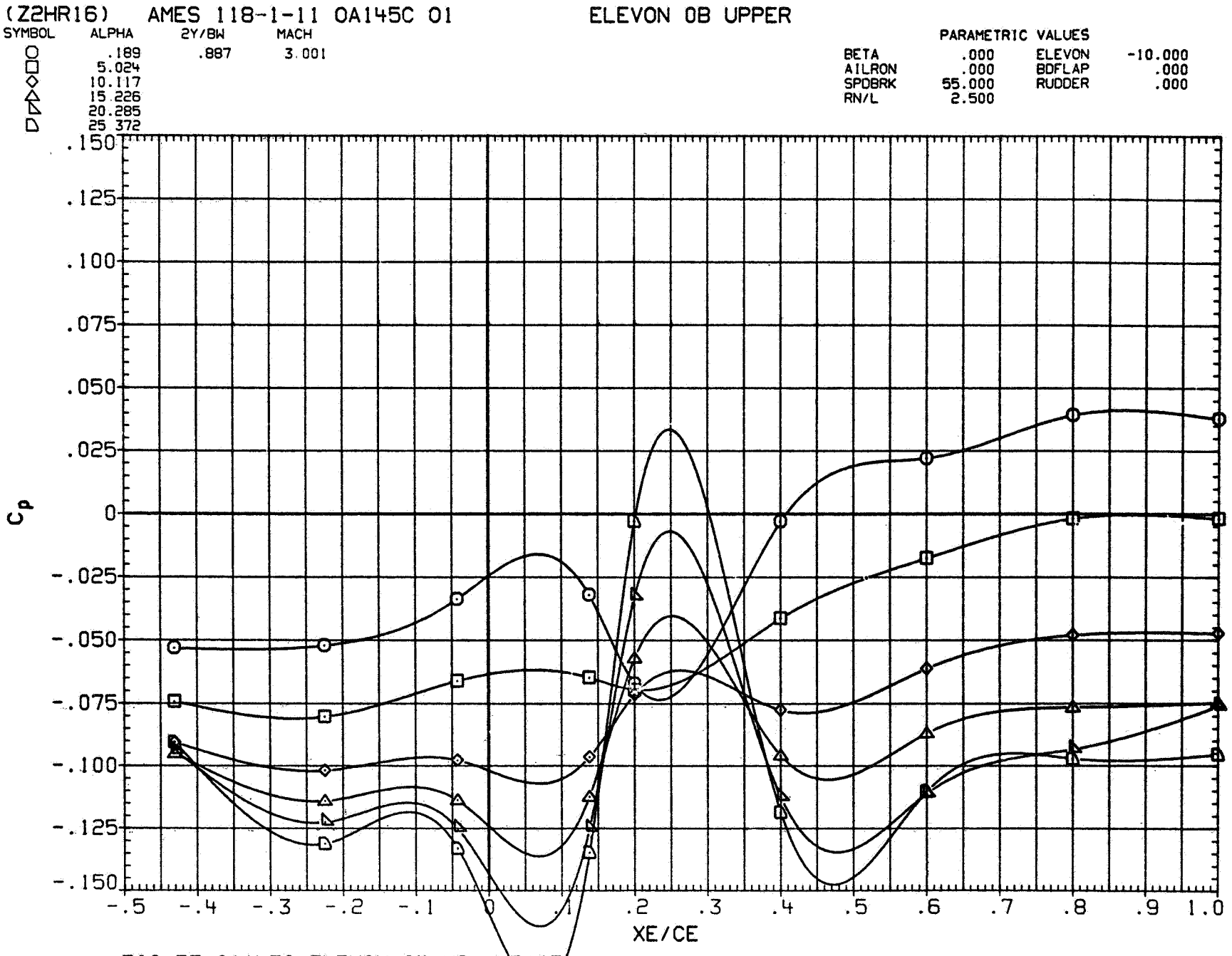


FIG.53 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

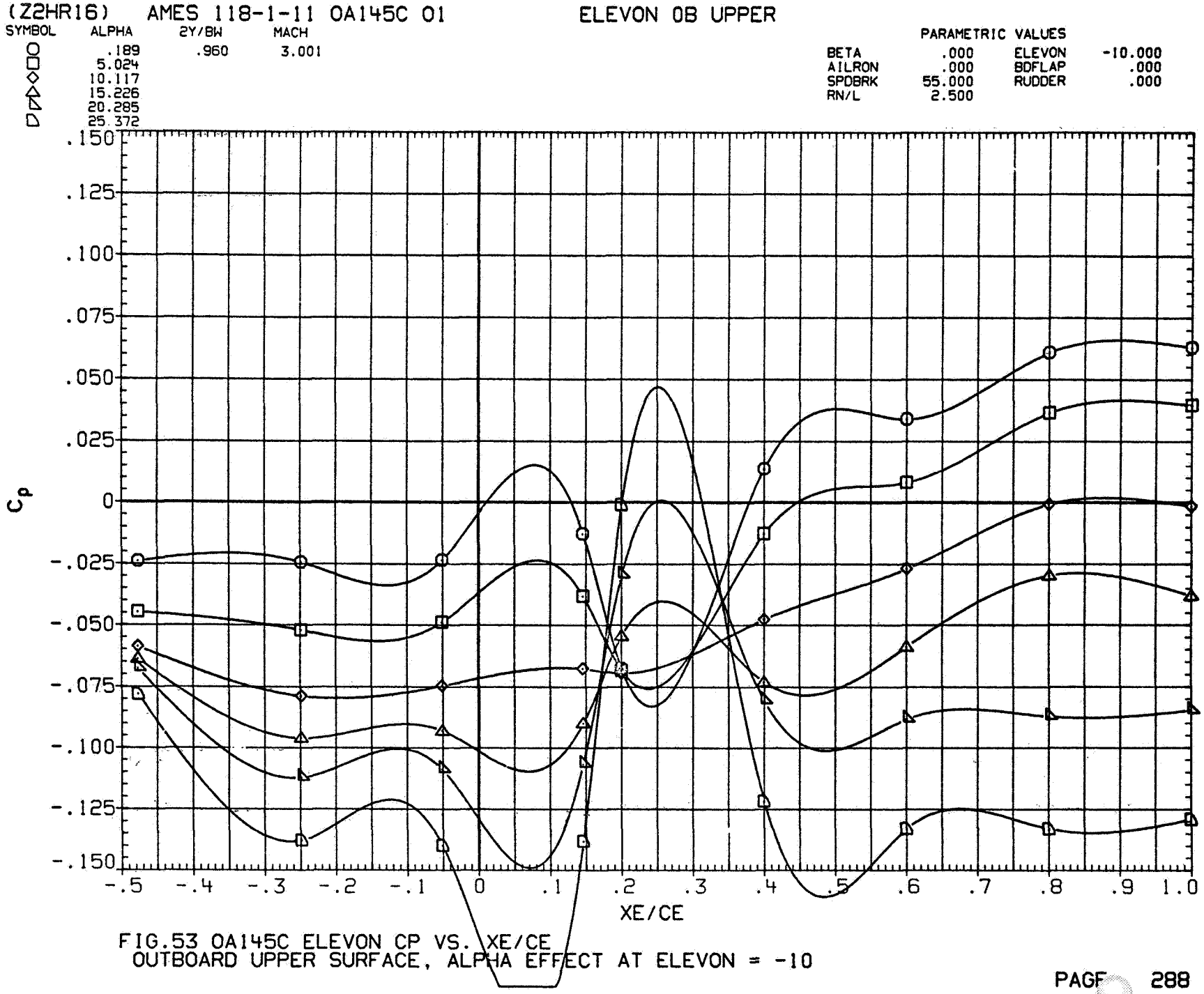


FIG.53 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

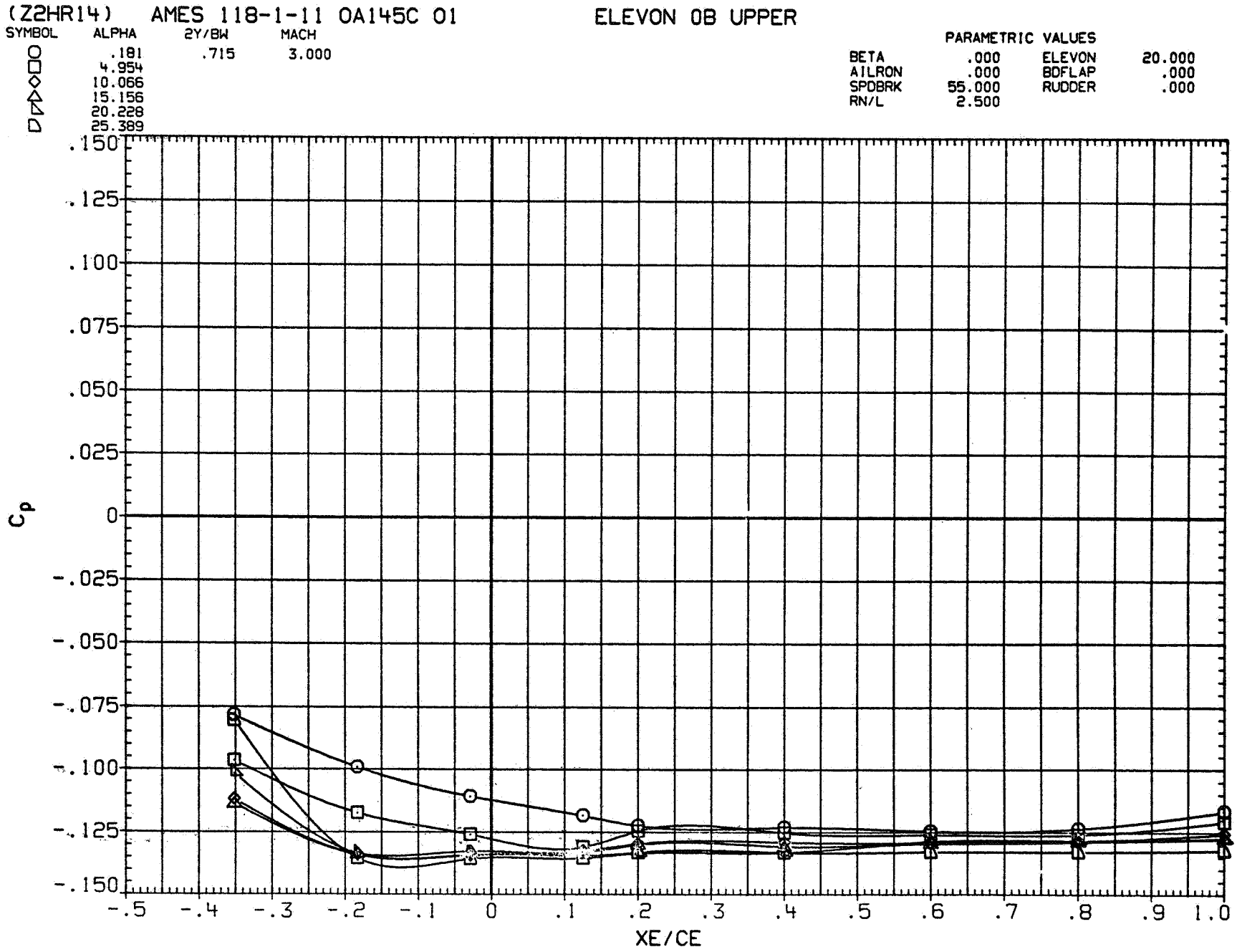


FIG.54 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

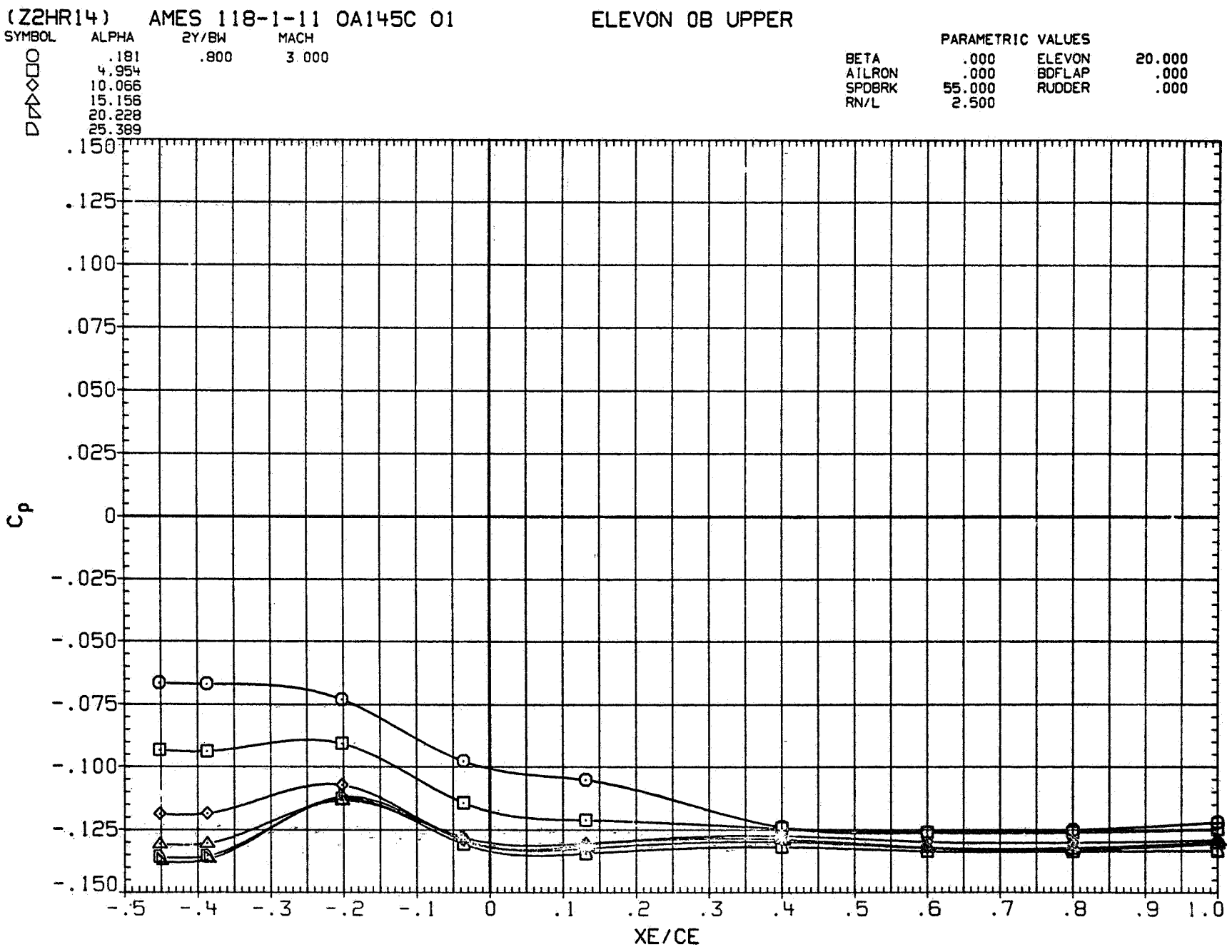


FIG.54 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

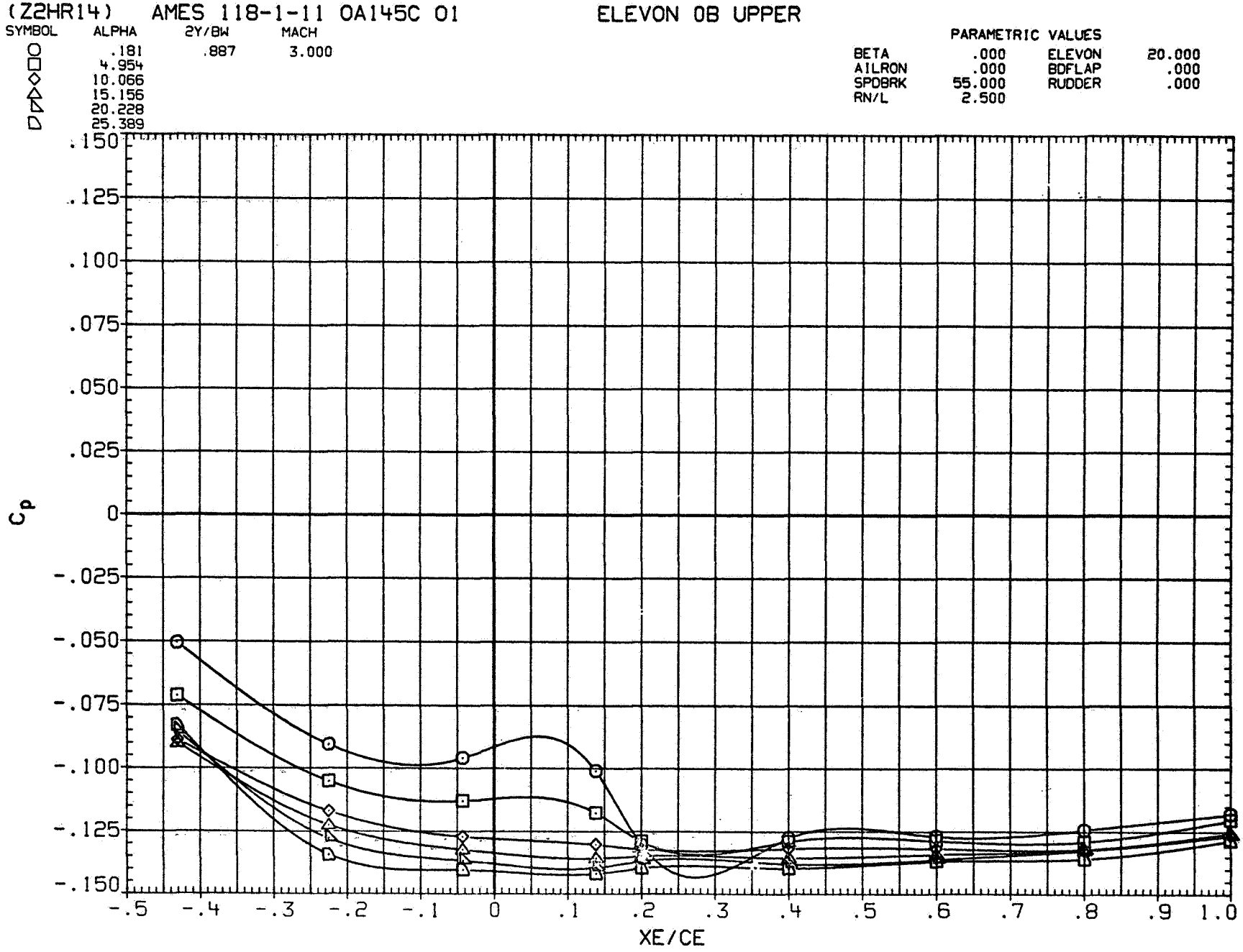


FIG.54 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

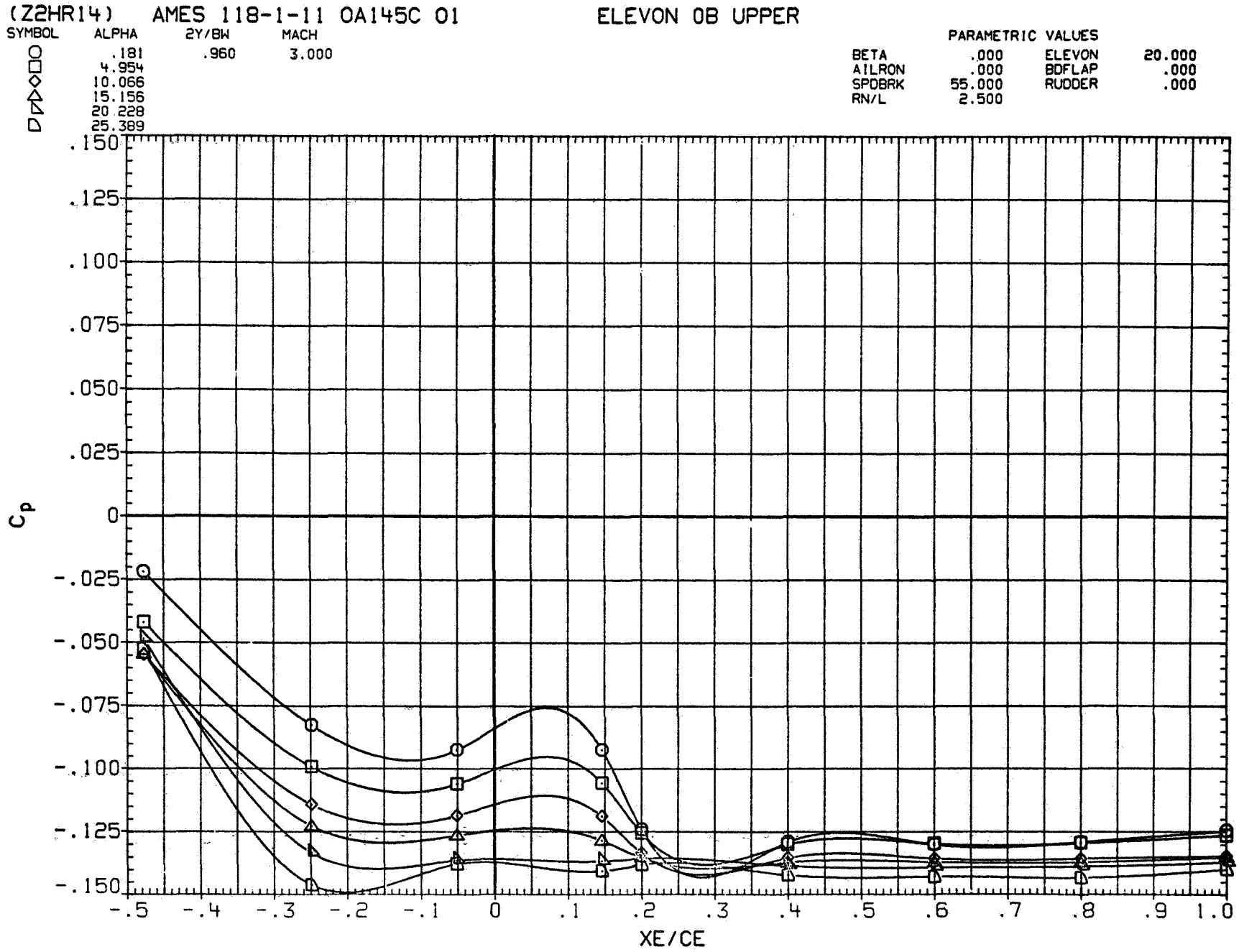


FIG.54 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

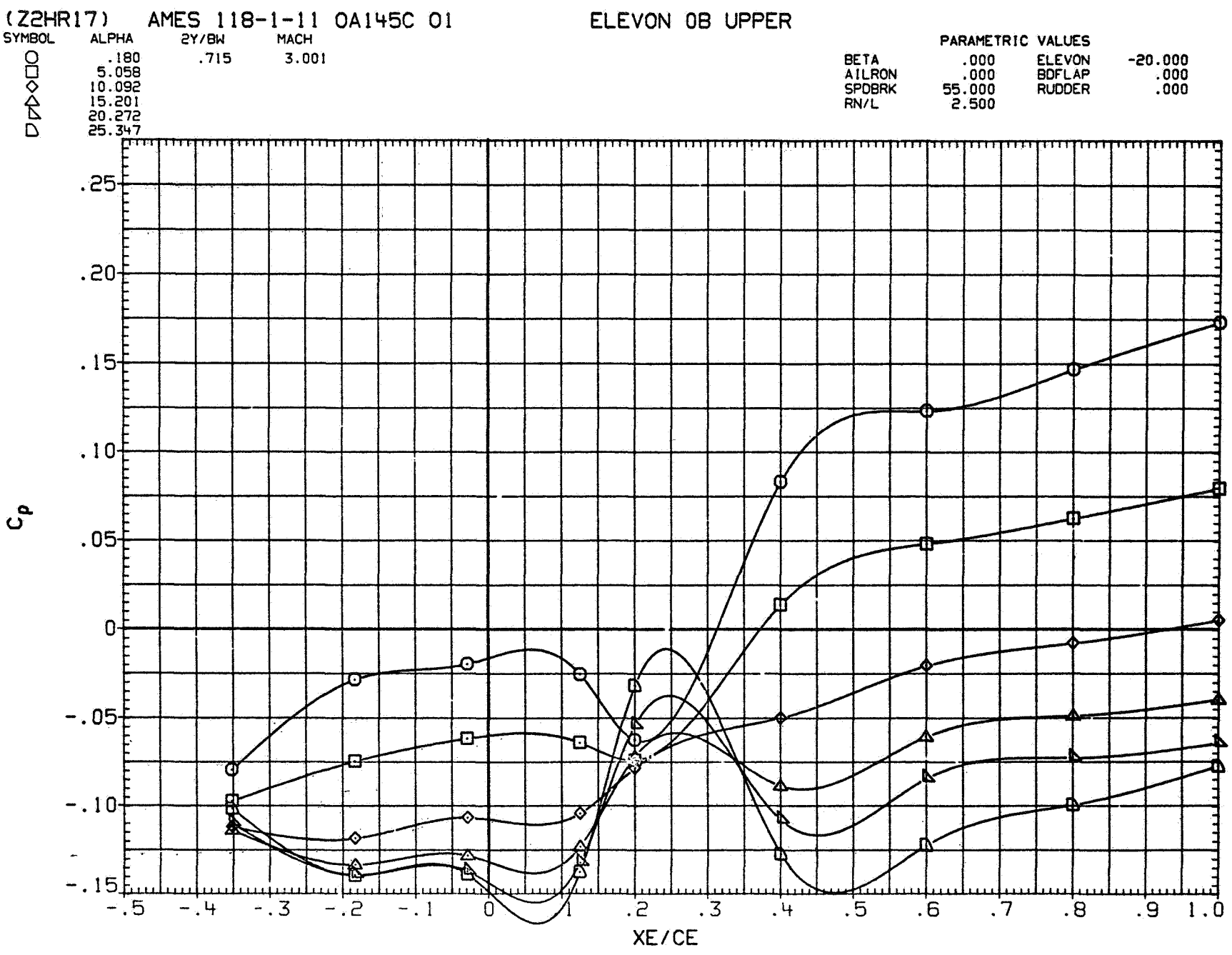


FIG.55 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

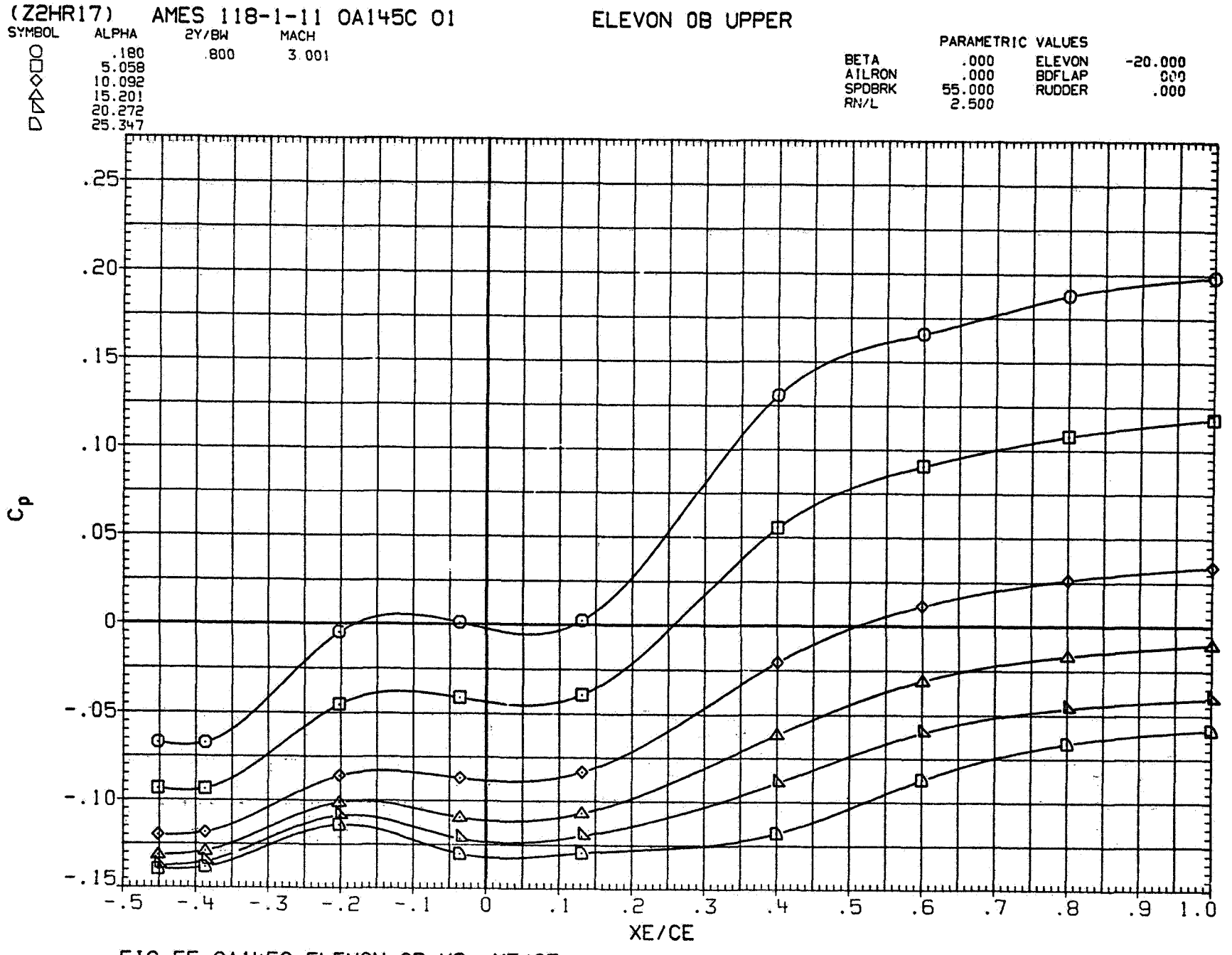


FIG.55 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

(Z2HR17) AMES 118-1-11 OA145C 01 ELEVON OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.180	.887	3.001
□	5.058		
◇	10.092		
△	15.201		
▷	20.272		
▷	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

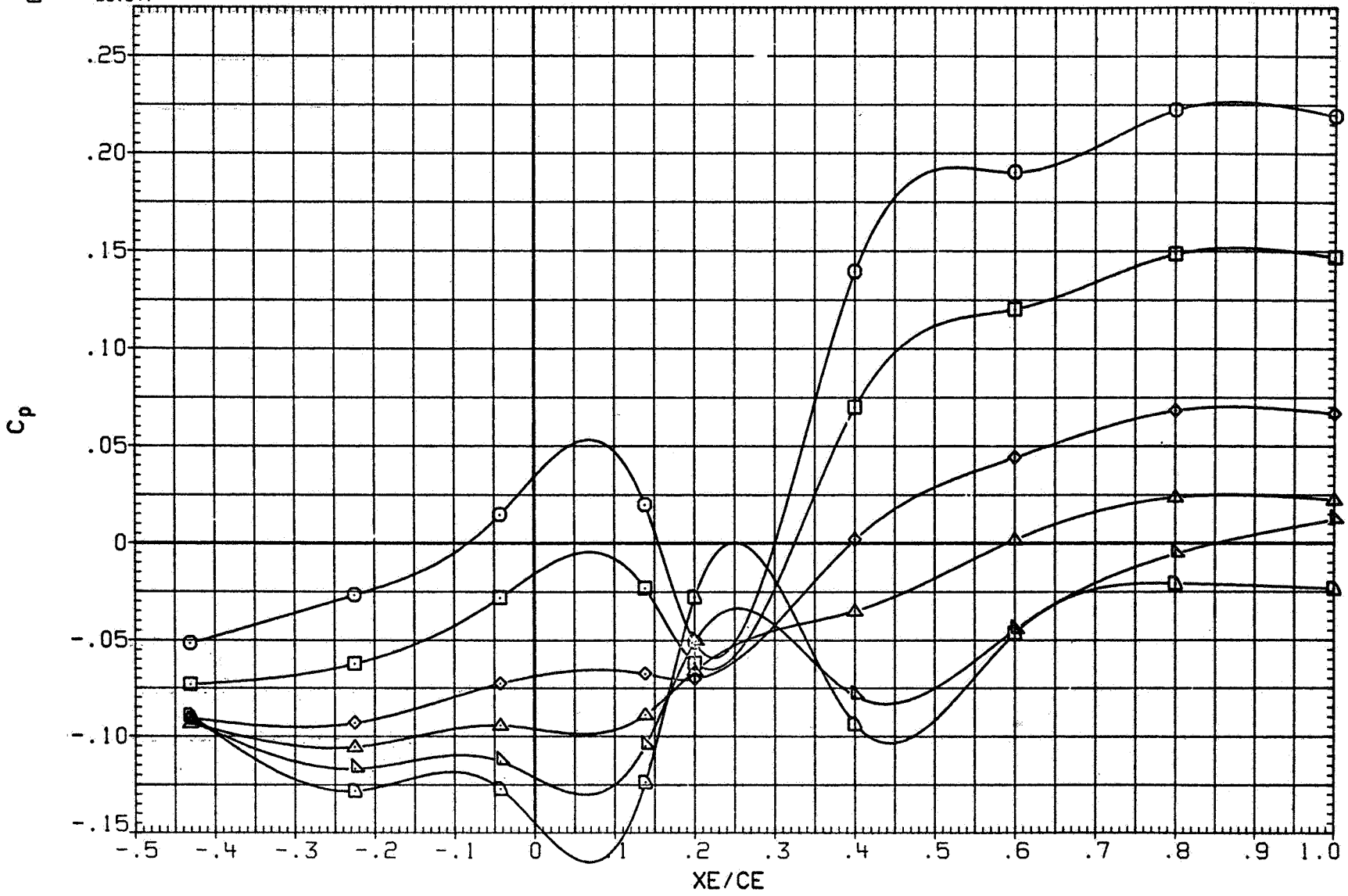


FIG.55 OA145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

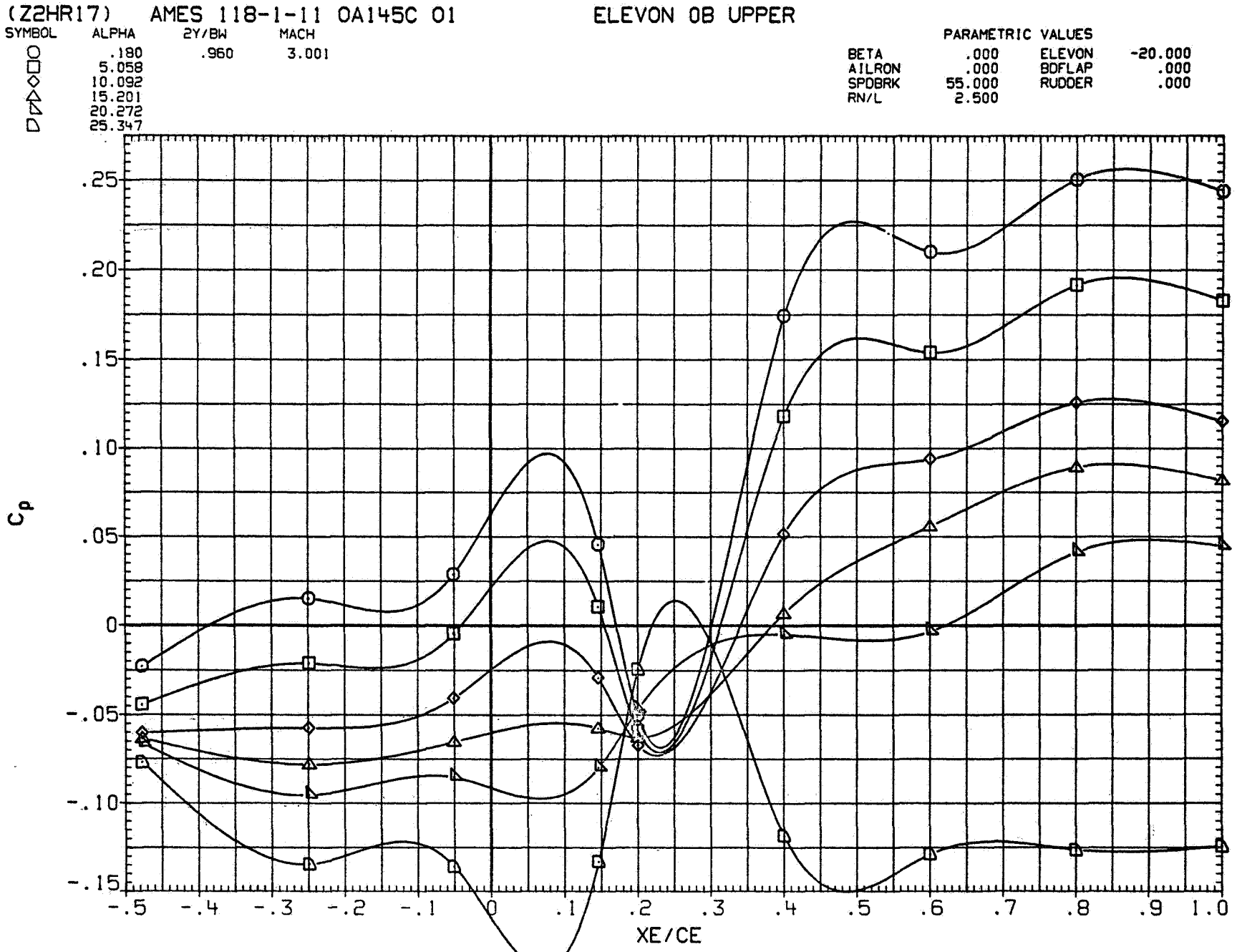


FIG.55 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

(Z2HR18) AMES 118-1-11 0A145C 01 ELEVON 0B UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	183	.715	3.001
□	5 026		
◇	10.092		
△	15.197		
◁	20 276		
▷	25.519		

PARAMETRIC VALUES

BETA	.000	ELEVON	-35.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

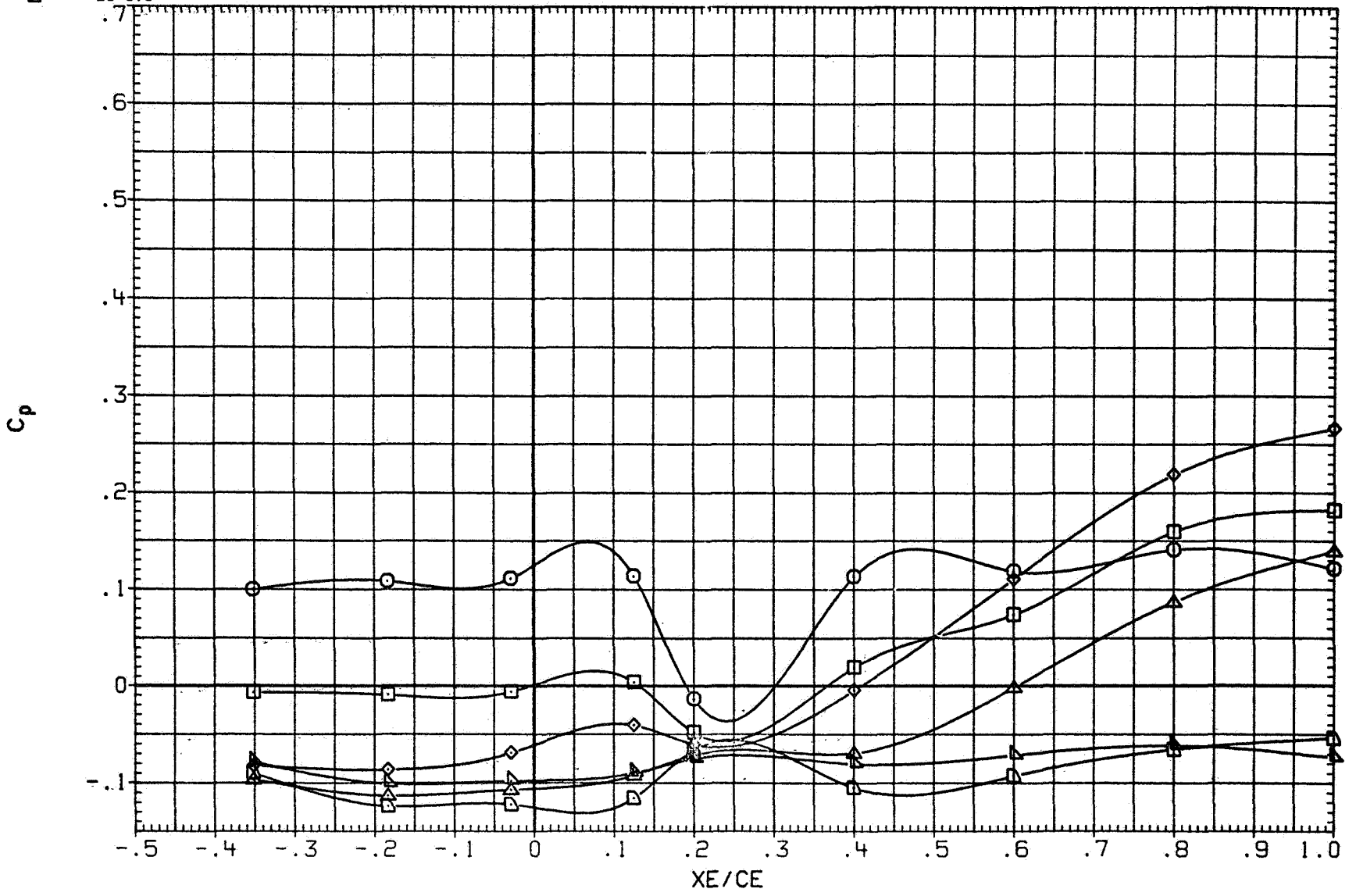


FIG.56 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

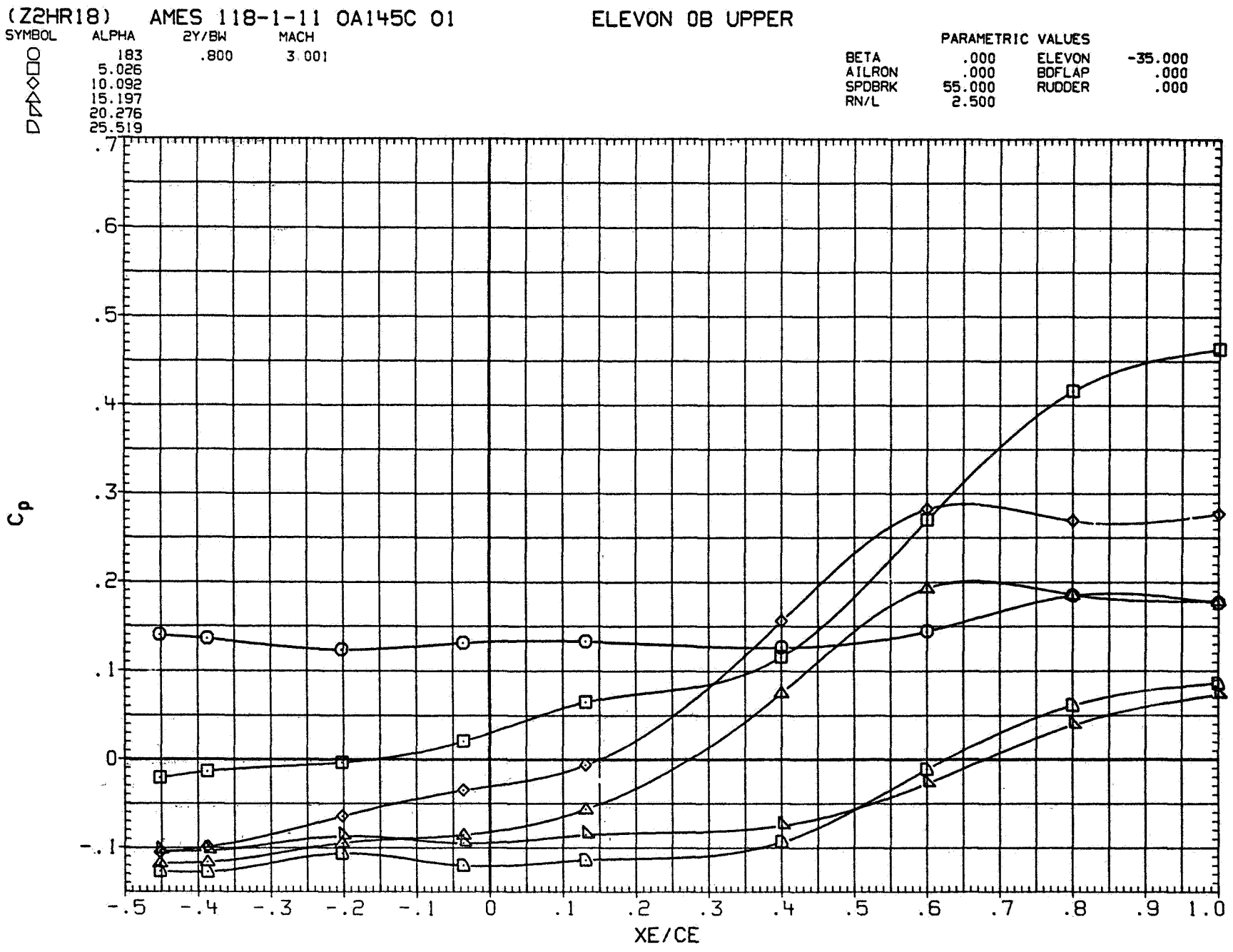


FIG.56 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

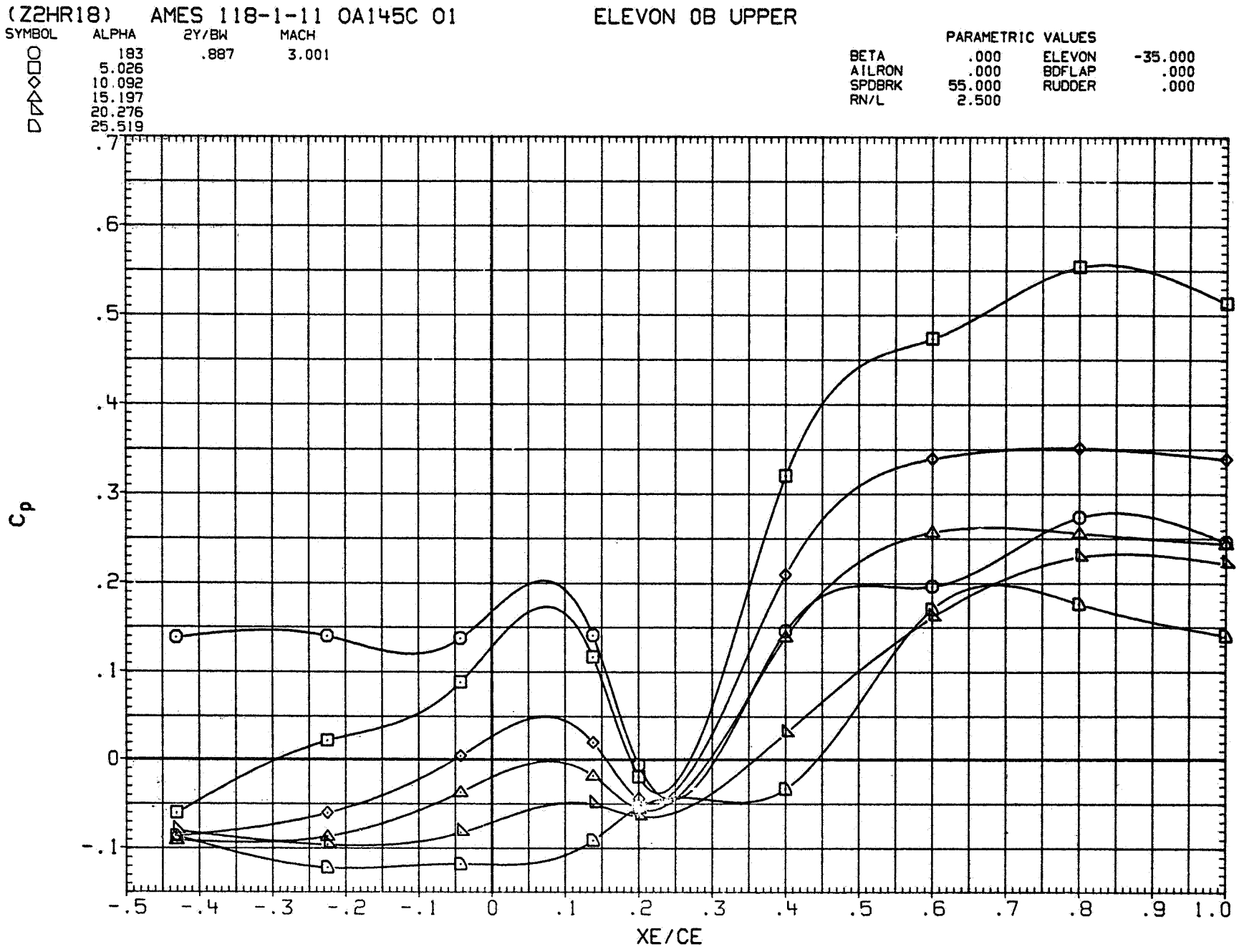


FIG.56 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

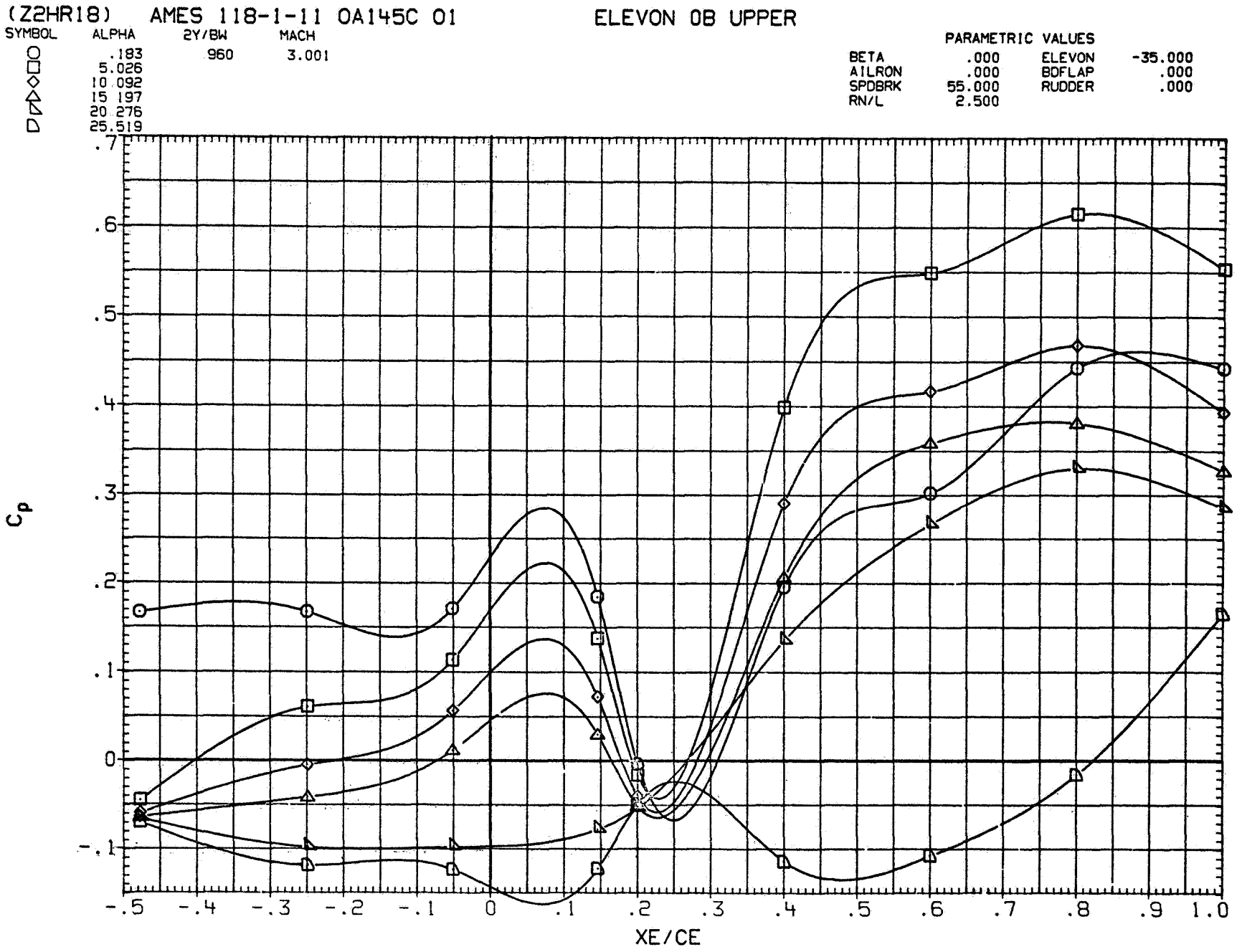


FIG.56 0A145C ELEVON CP VS. XE/CE
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

(R2HC02) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.307	.340	2.493
□	4.010		
◇	10.124		
◁	15.236		
△	20.318		
D	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

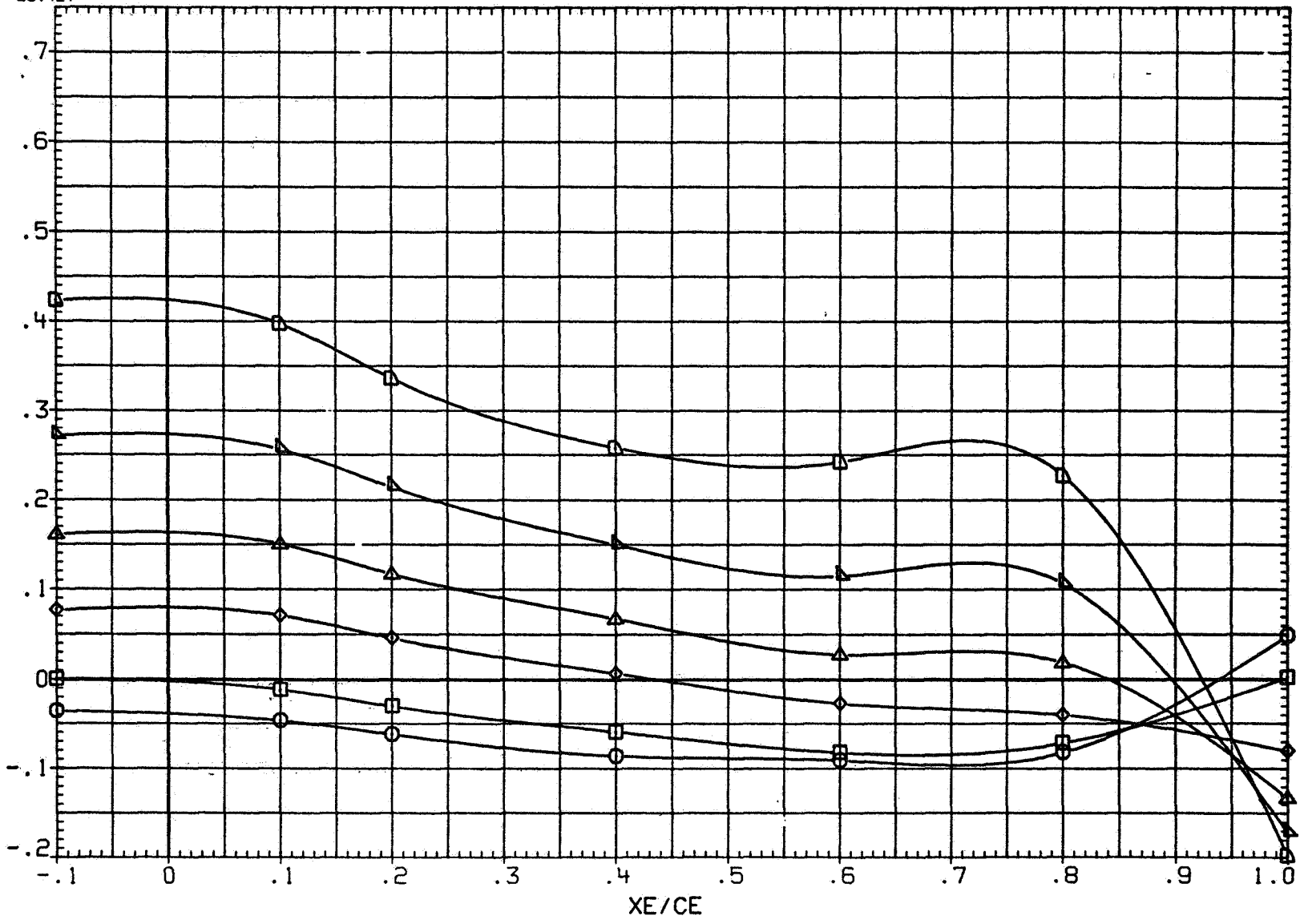


FIG.57 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HC02) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.307	.427	2.493
□	4.010		
◇	10.124		
△	15.236		
▷	20.318		
▱	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

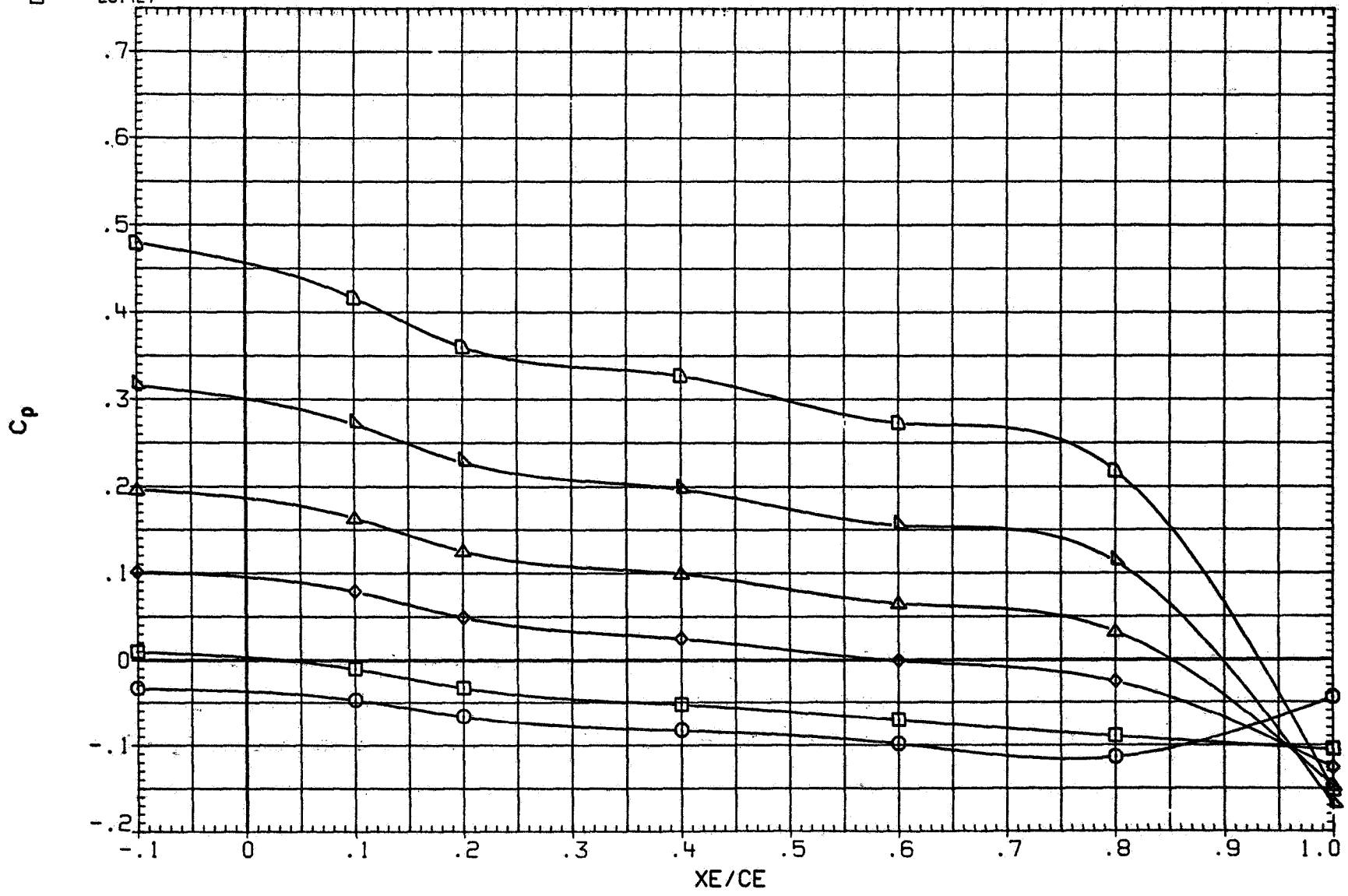


FIG.57 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HC02) AMES 118-1-11 0A145C 01 ELEVON 18 LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.307	.534	2.493
□	4.010		
◇	10.124		
△	15.236		
◁	20.318		
D	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

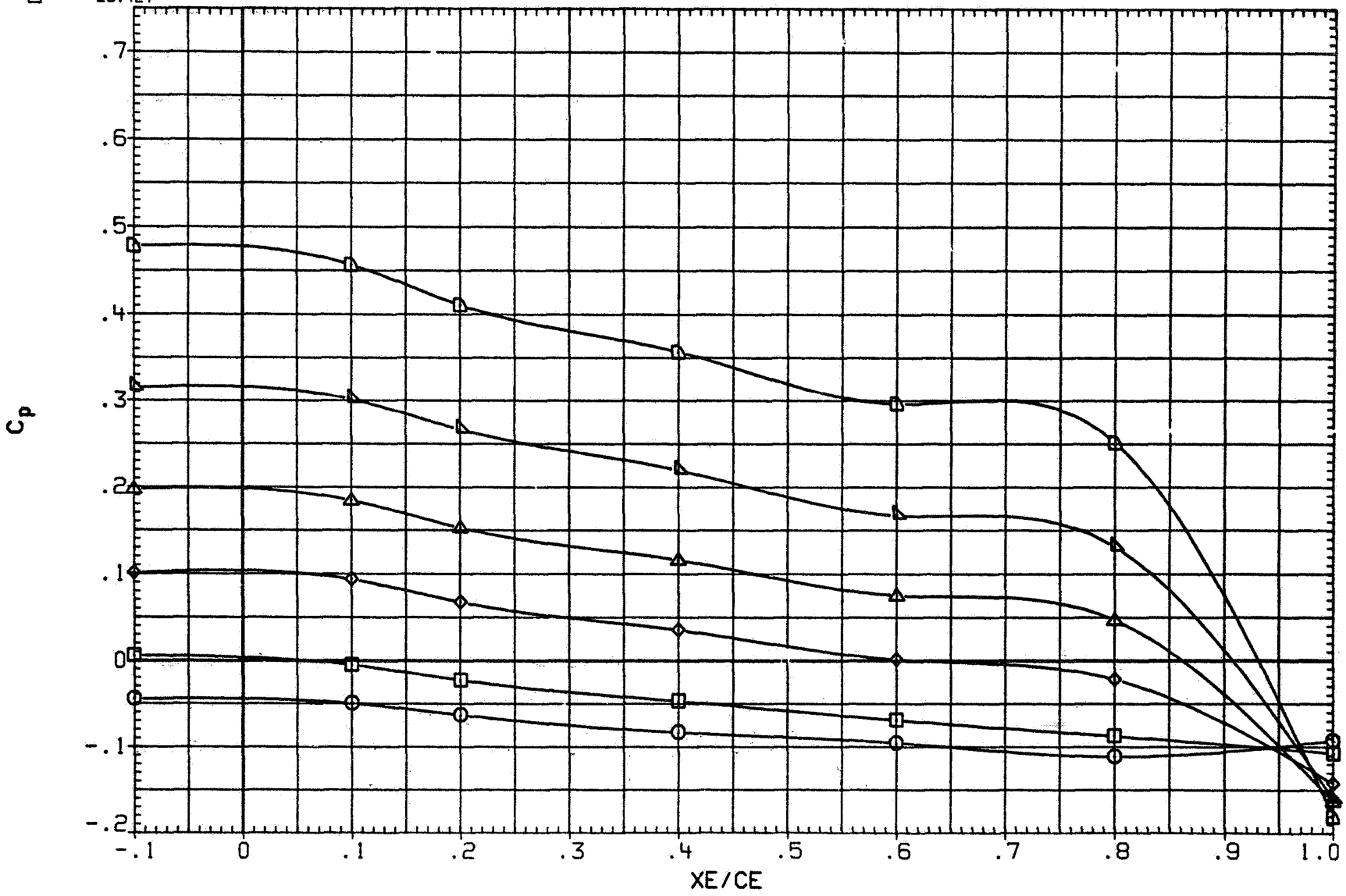


FIG.57 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HC02) AMES 118-1-11 0A145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.307	.615	2.493
□	4.010		
◇	10.124		
△	15.236		
⌀	20.318		
D	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

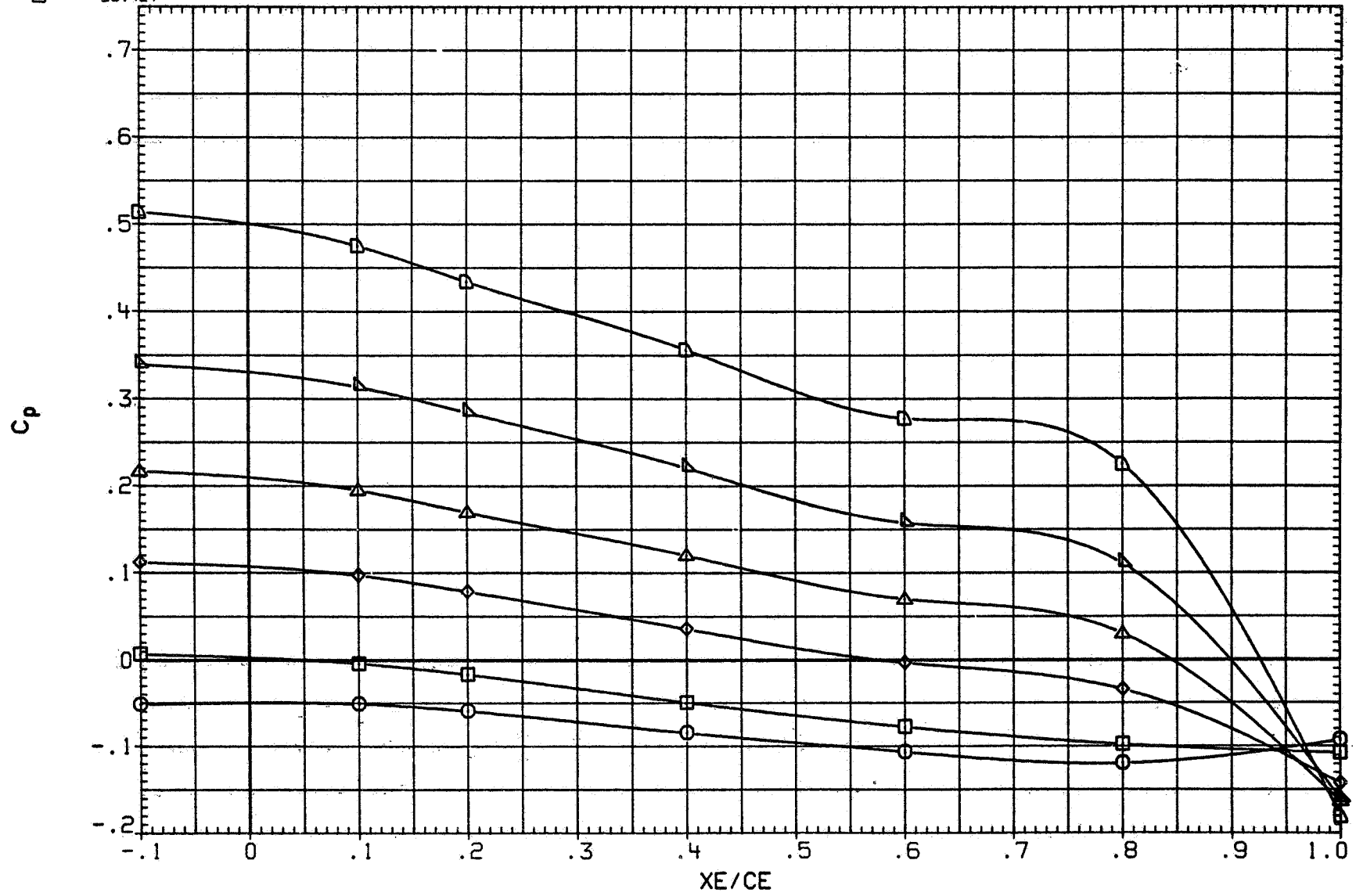


FIG.57 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HC02) AMES 118-1-11 OA145C 01

ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.340	3.001
□	3.882		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

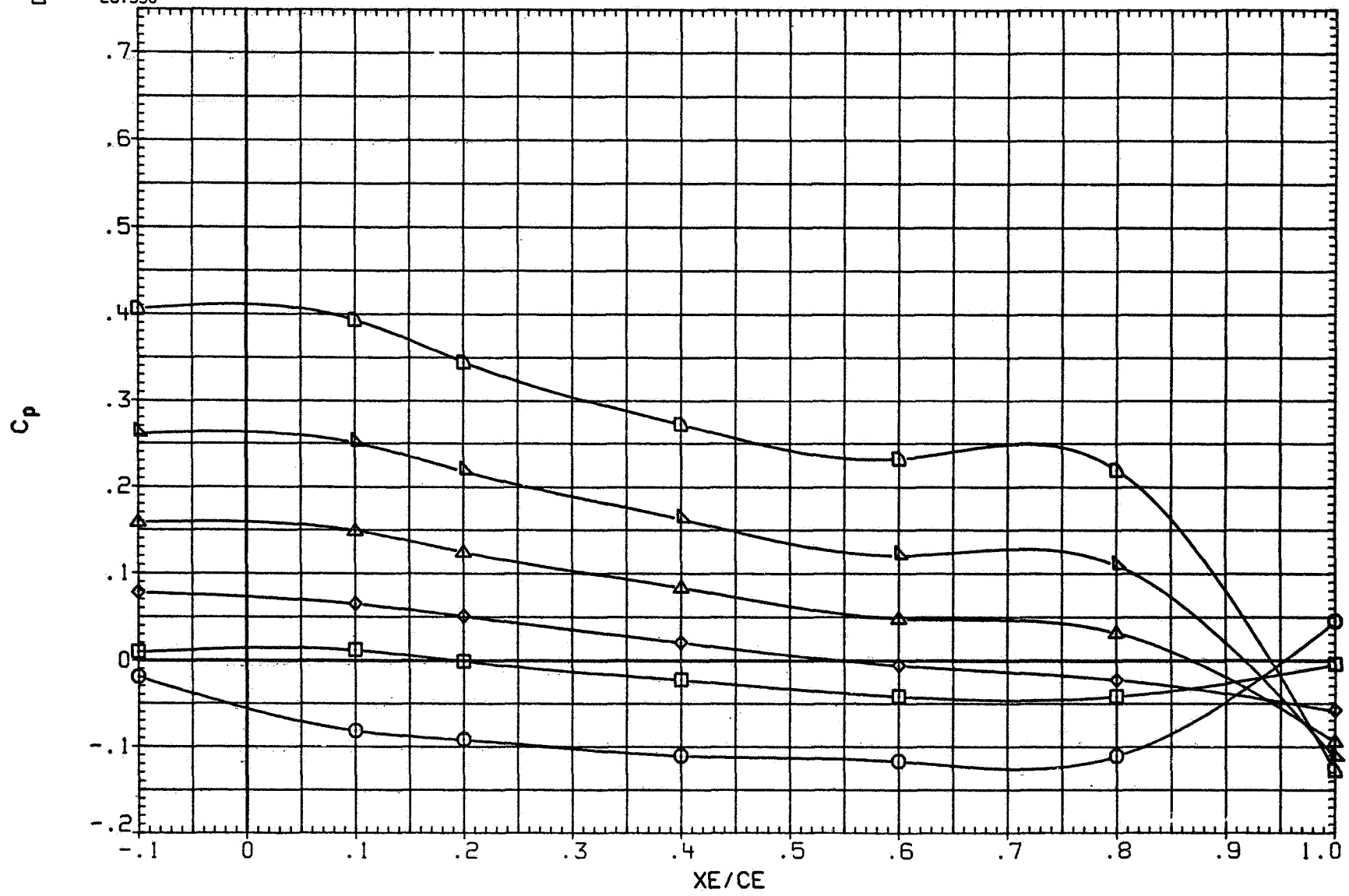


FIG.57 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HC02) AMES 118-1-11 0A145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.427	3.001
□	3.882		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

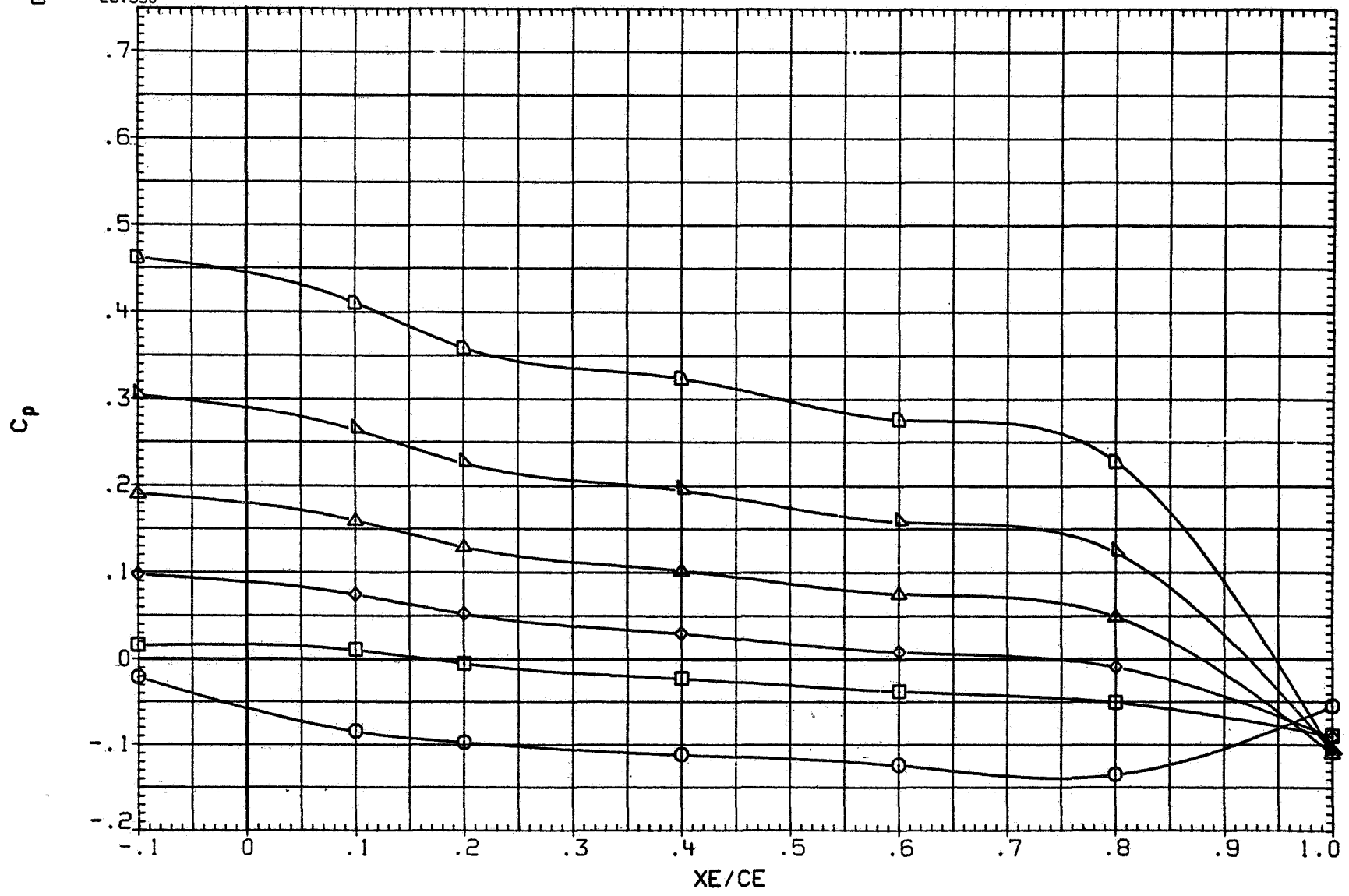


FIG.57 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

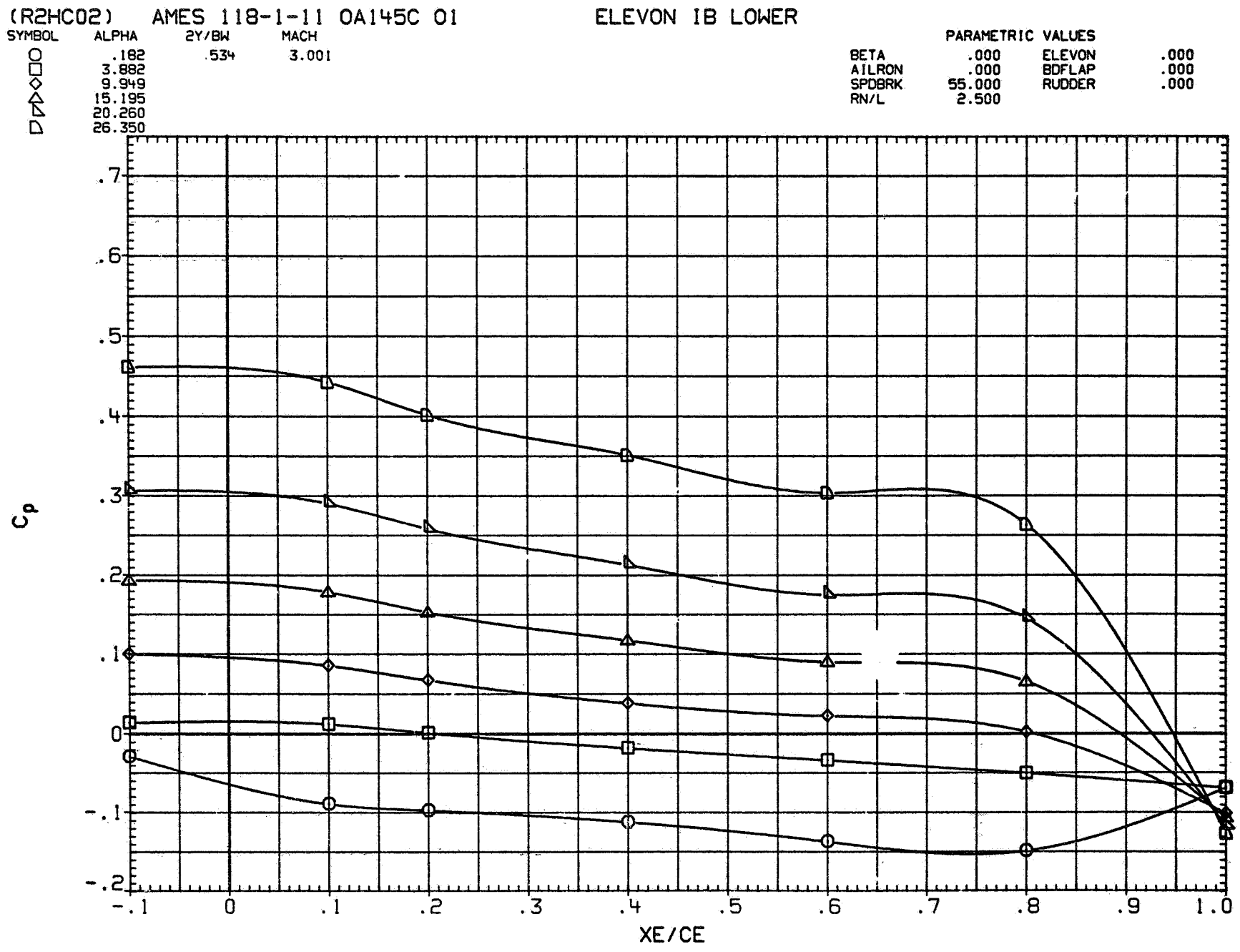


FIG.57 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HC02) AMES 118-1-11 0A145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.615	3.001
□	3.882		
◇	9.949		
◁	15.195		
△	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

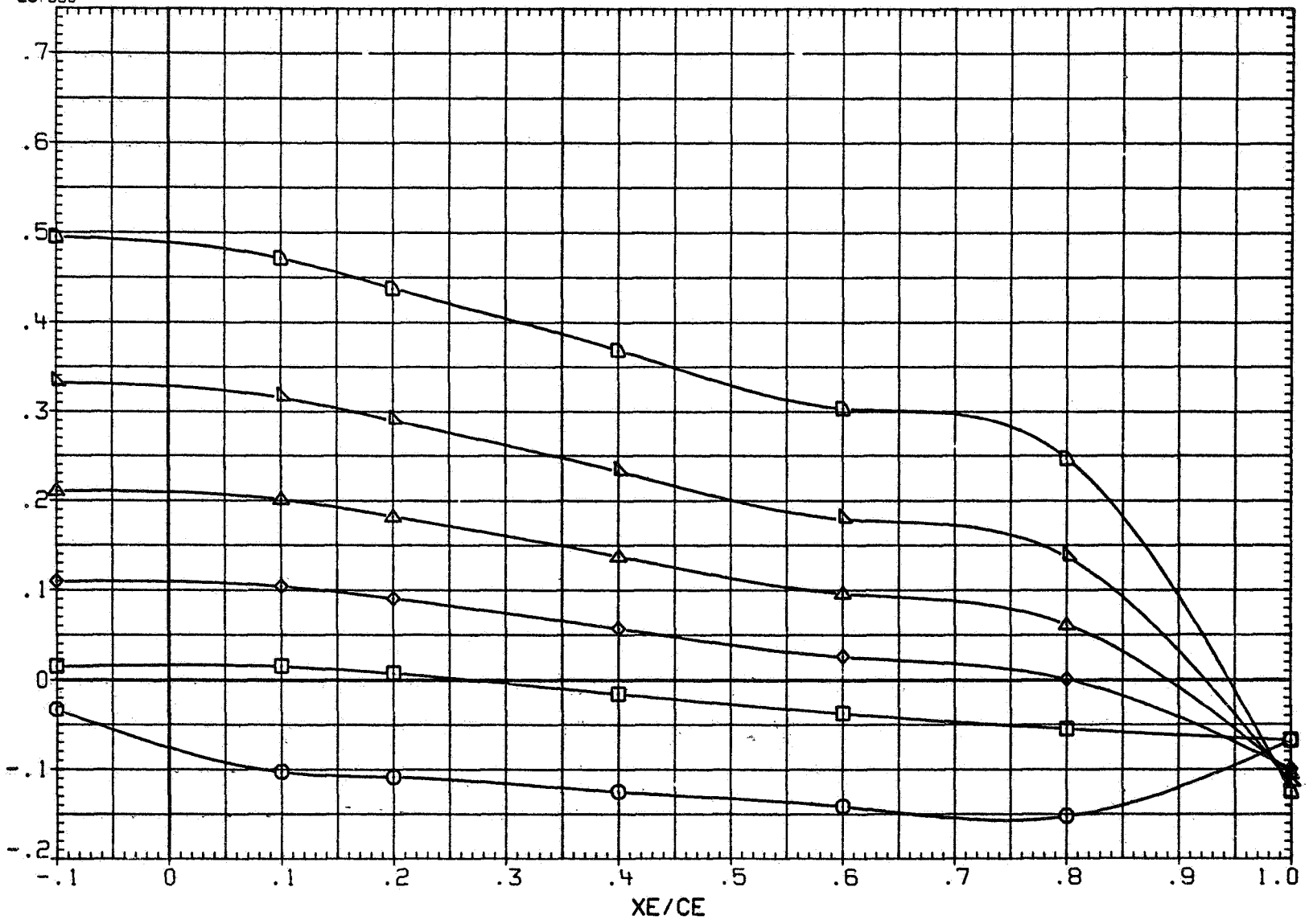


FIG.57 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

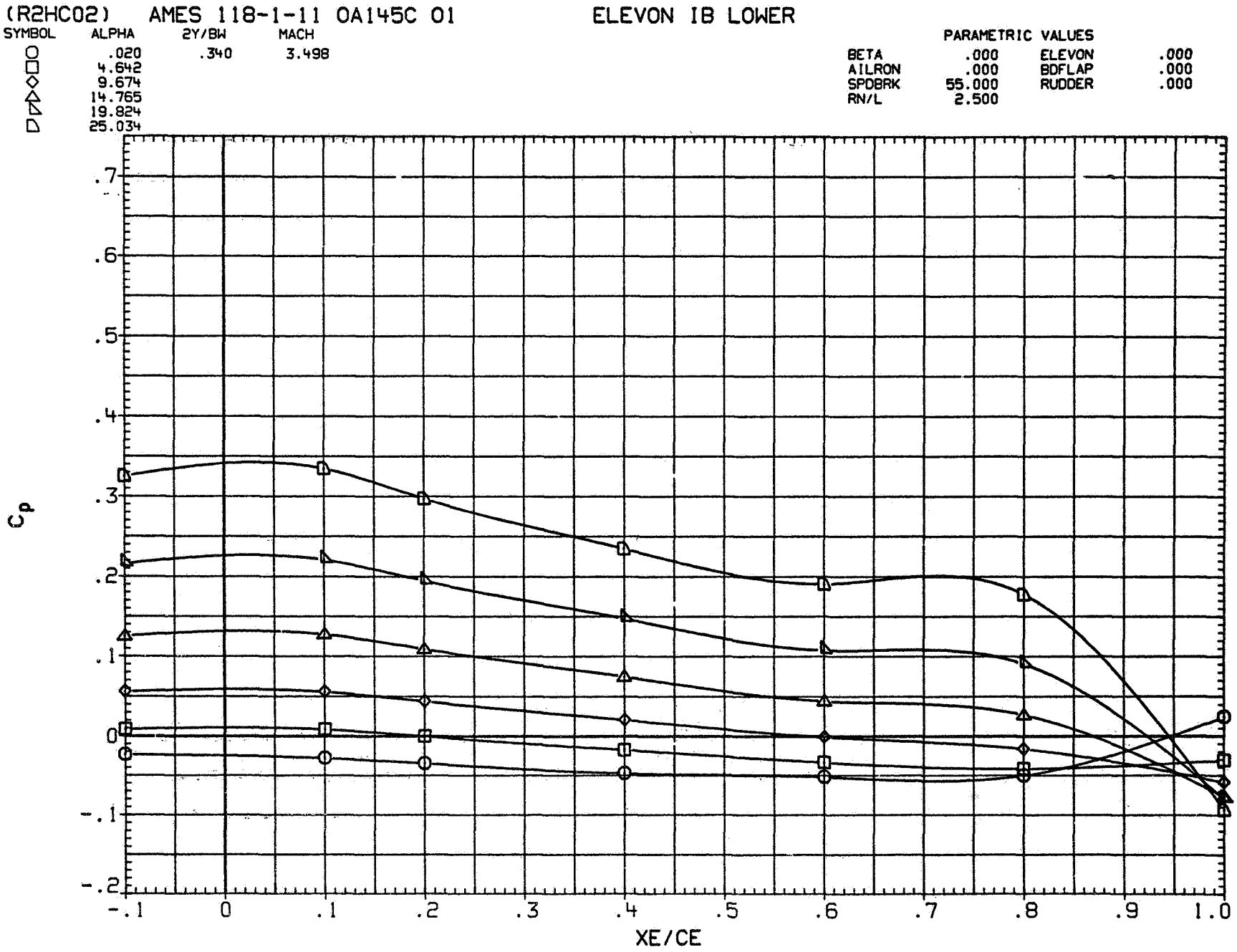


FIG.57 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HC02) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.020	.427	3.498
□	4.642		
◇	9.674		
△	14.765		
◁	19.824		
▷	25.034		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

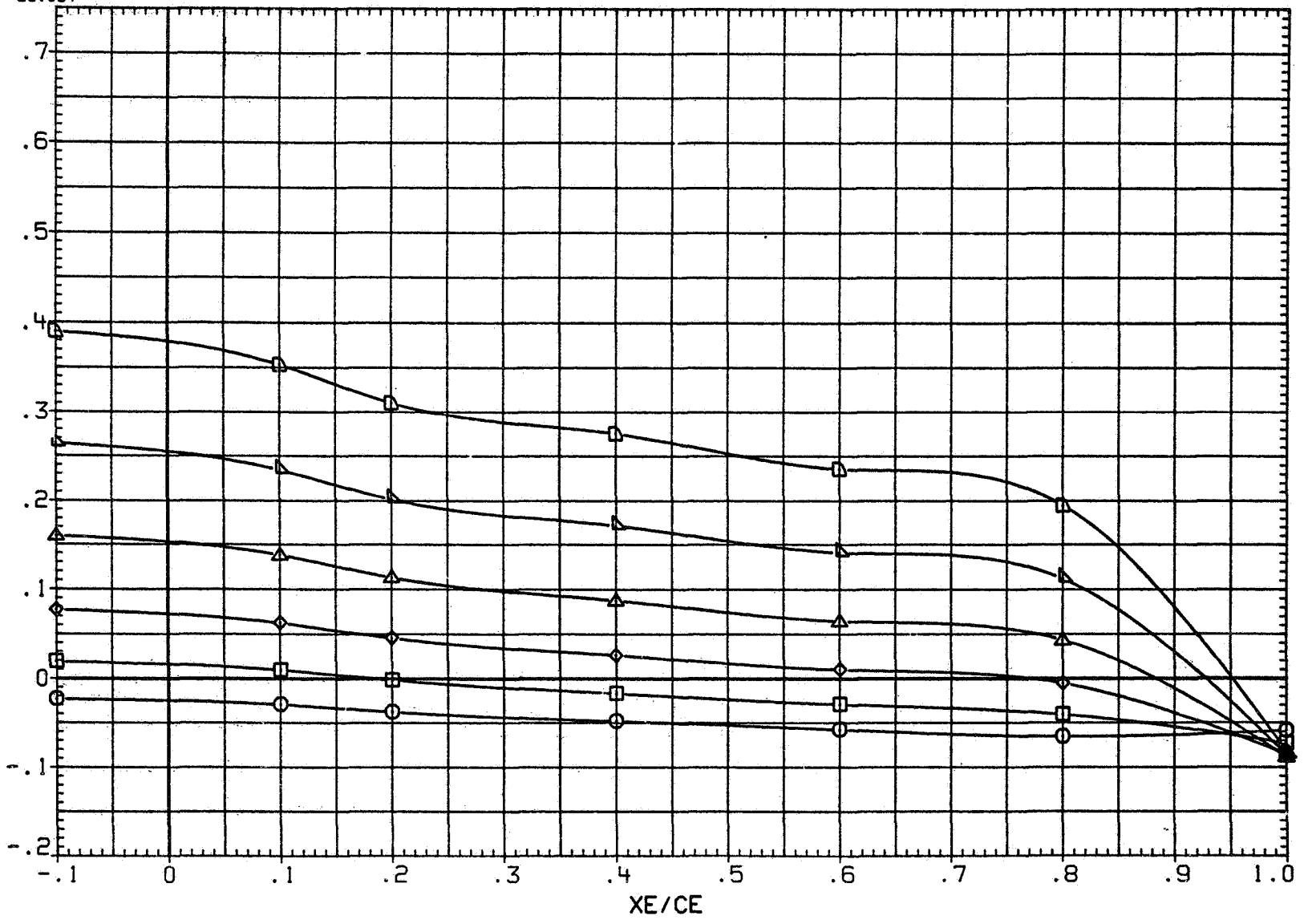


FIG.57 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HC02) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.020	.534	3.498
□	4.642		
◇	9.674		
△	14.765		
◁	19.824		
▷	25.034		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

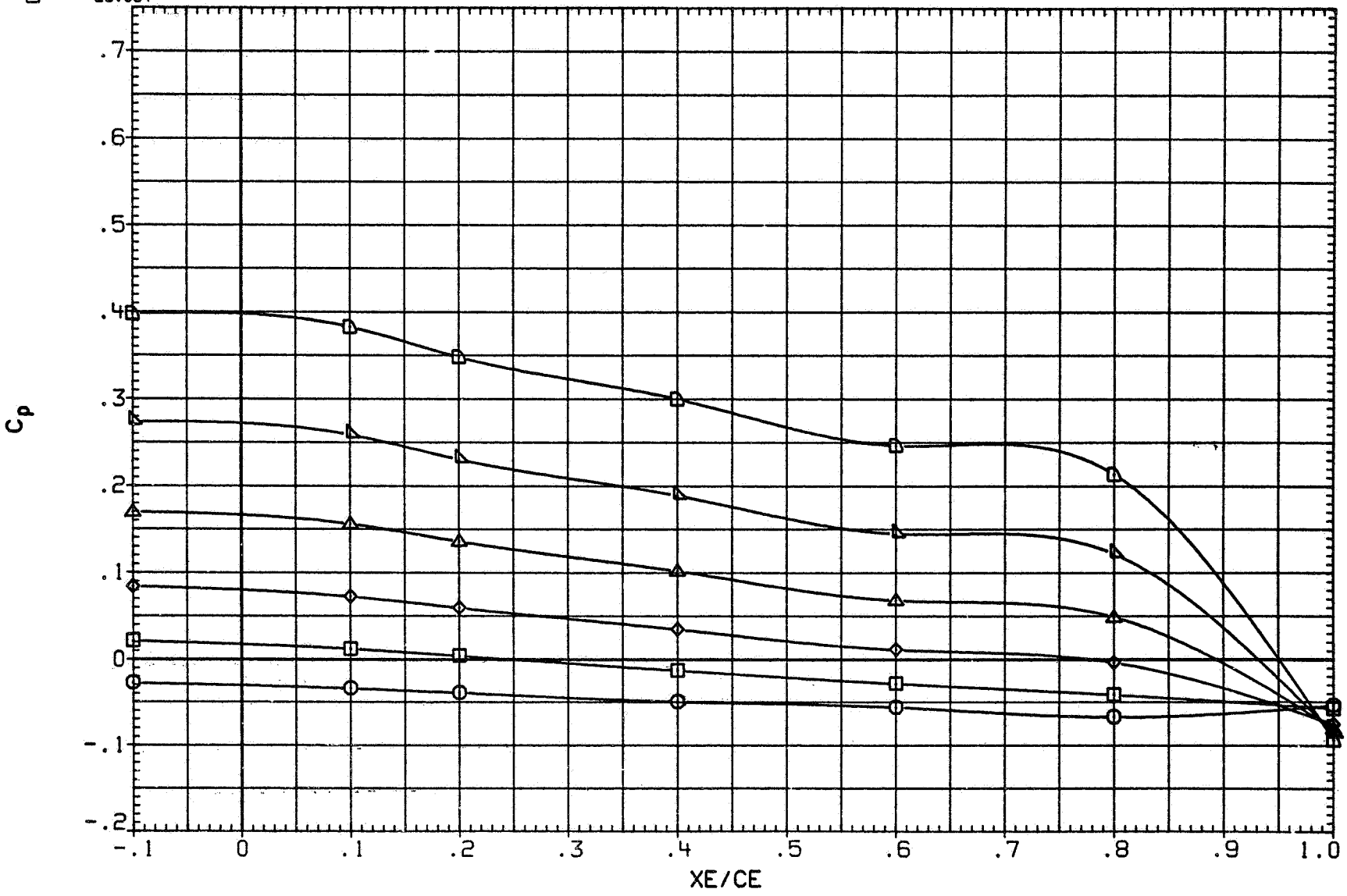


FIG.57 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HC02) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.020	.615	3.498
□	4.642		
◇	9.674		
△	14.765		
◁	19.824		
▷	25.034		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

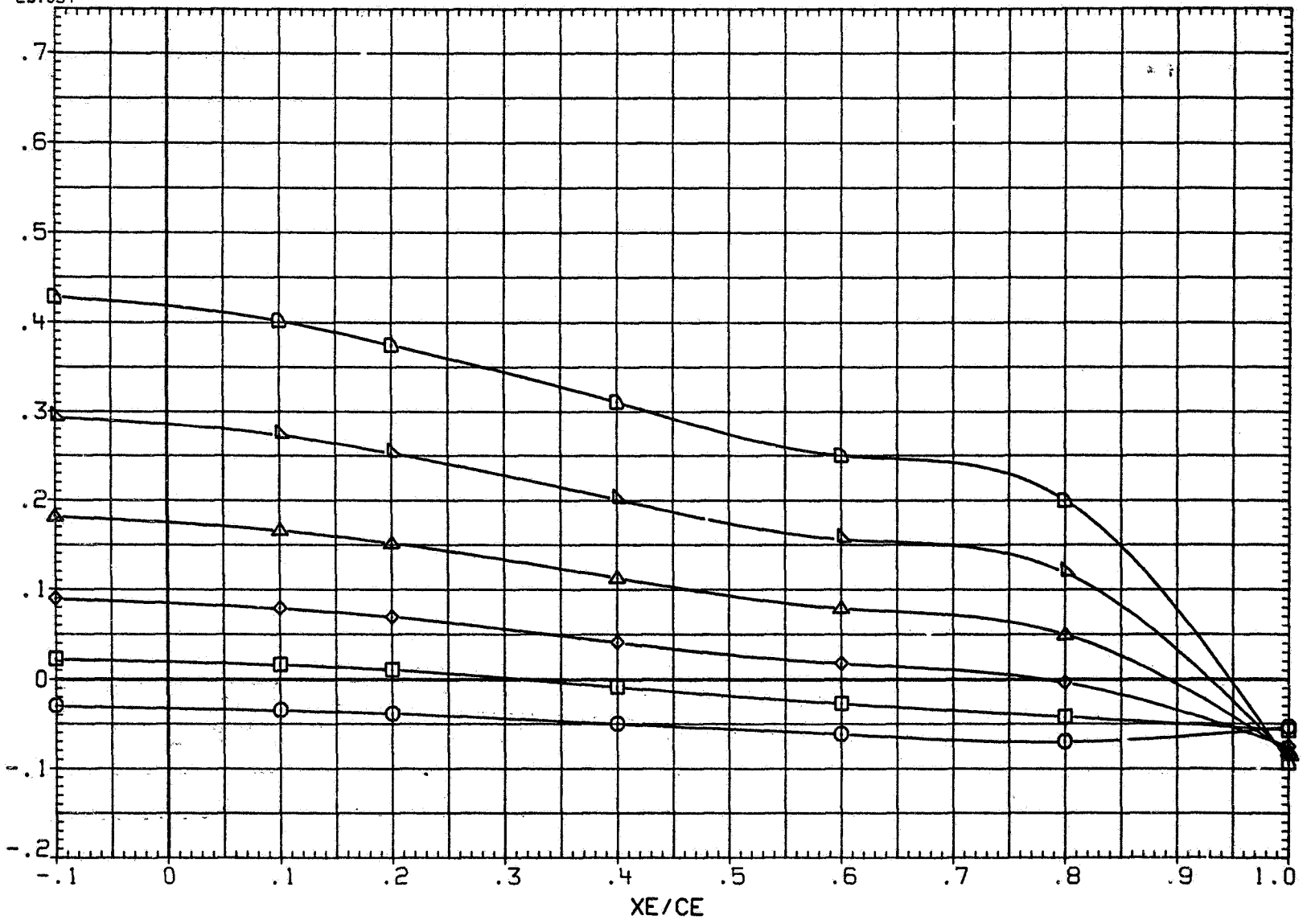


FIG.57 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

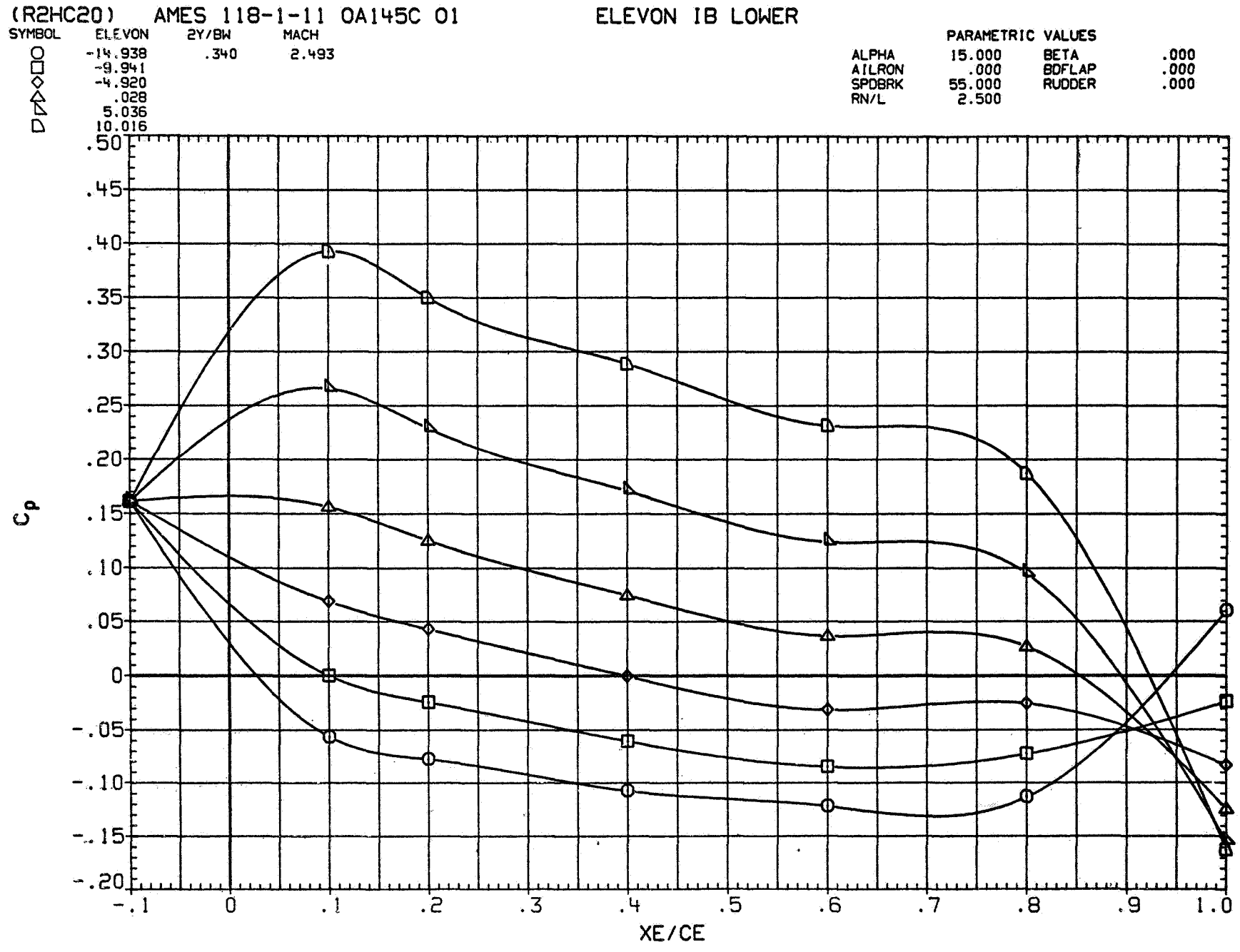


FIG.58 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC20) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.938	.427	2.493
□	-9.941		
◇	-4.920		
△	.028		
◁	5.036		
D	10.016		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

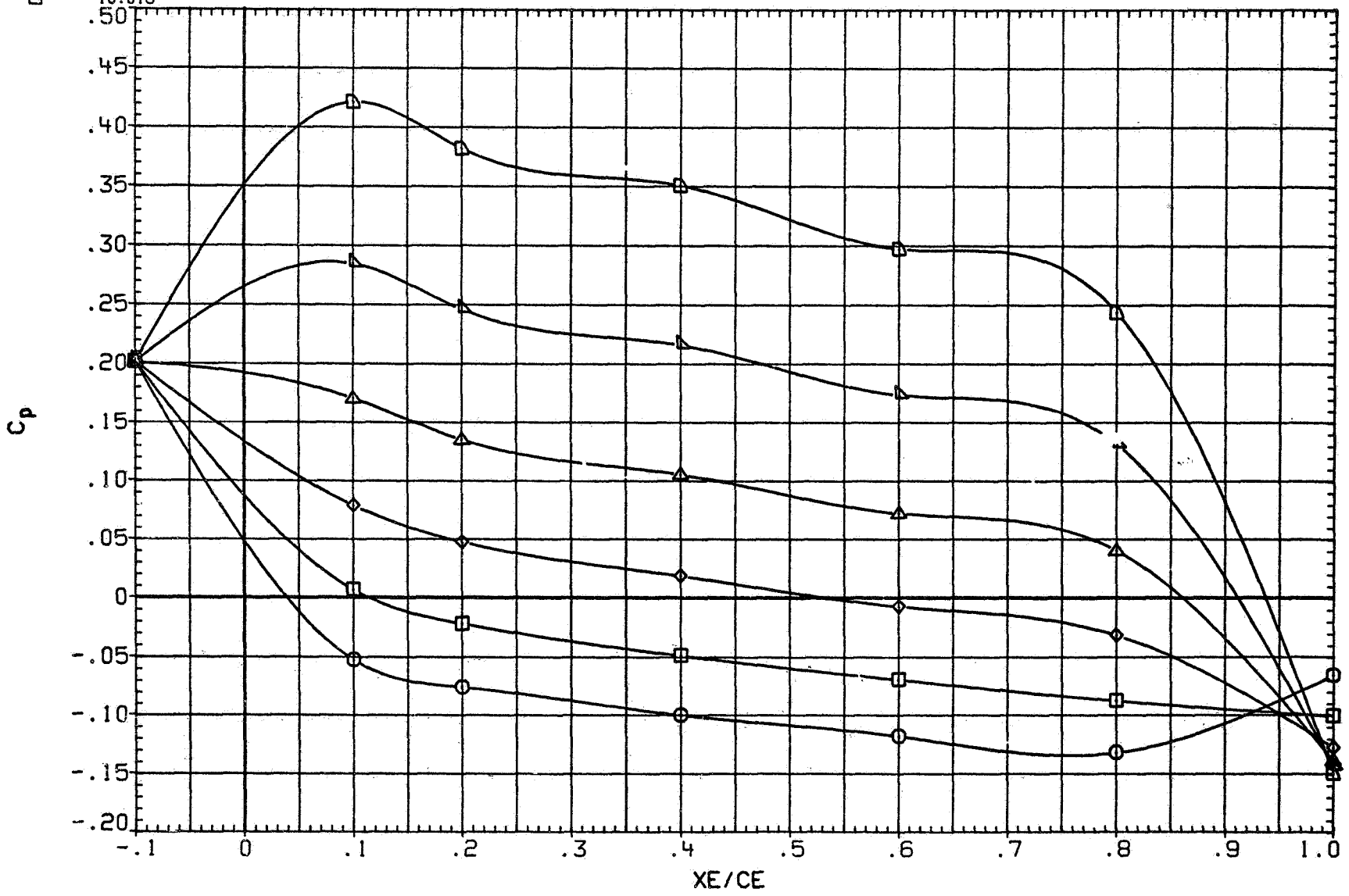


FIG.58 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC20) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.938	.534	2.493
□	-9.941		
◇	-4.920		
△	.028		
◁	5.036		
▷	10.016		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

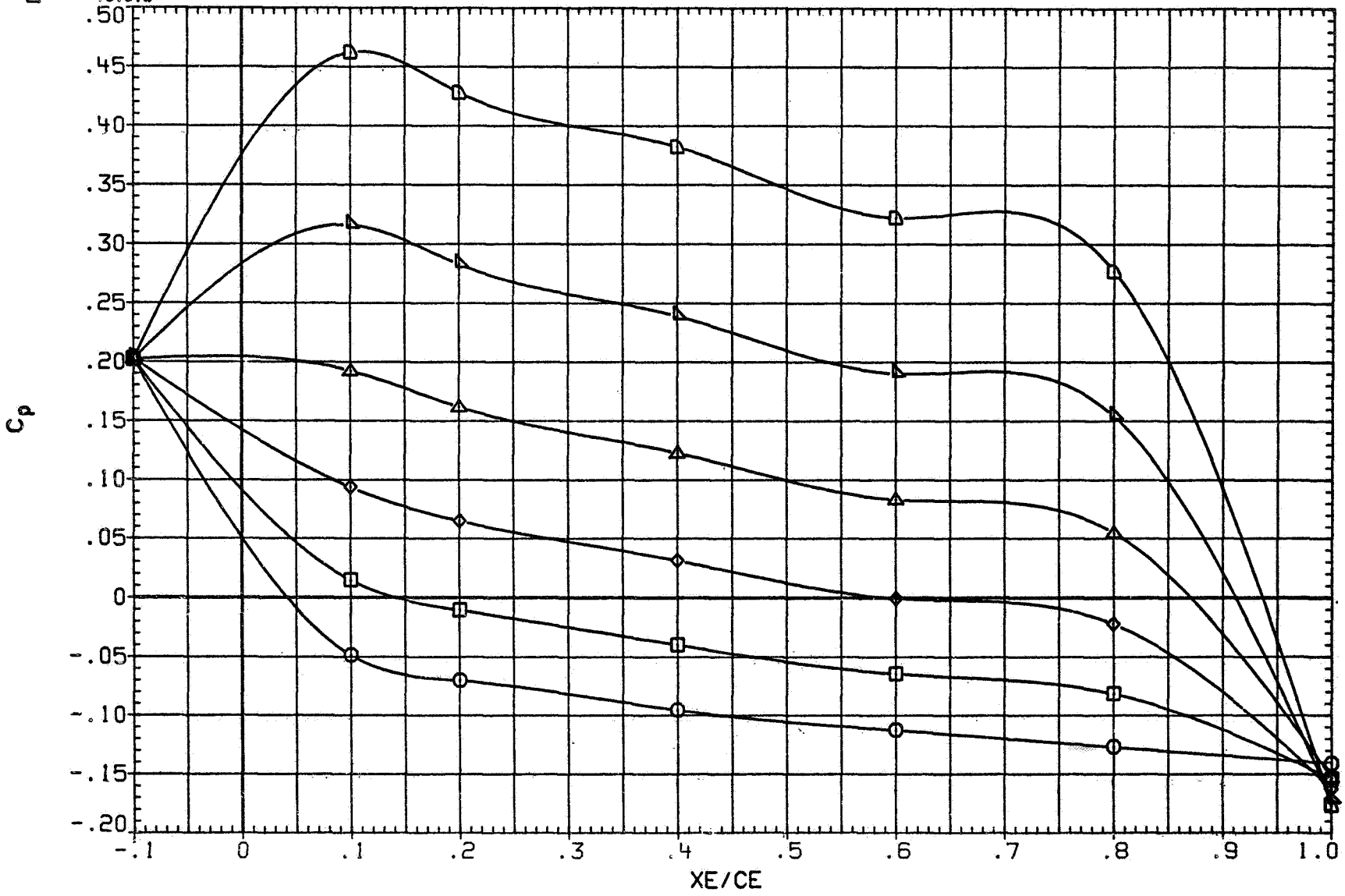


FIG.58 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC20) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.938	.615	2.493
□	-9.941		
◁	-4.920		
△	.028		
◇	5.036		
◻	10.016		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55 000	RUDDER	.000
RN/L	2.500		

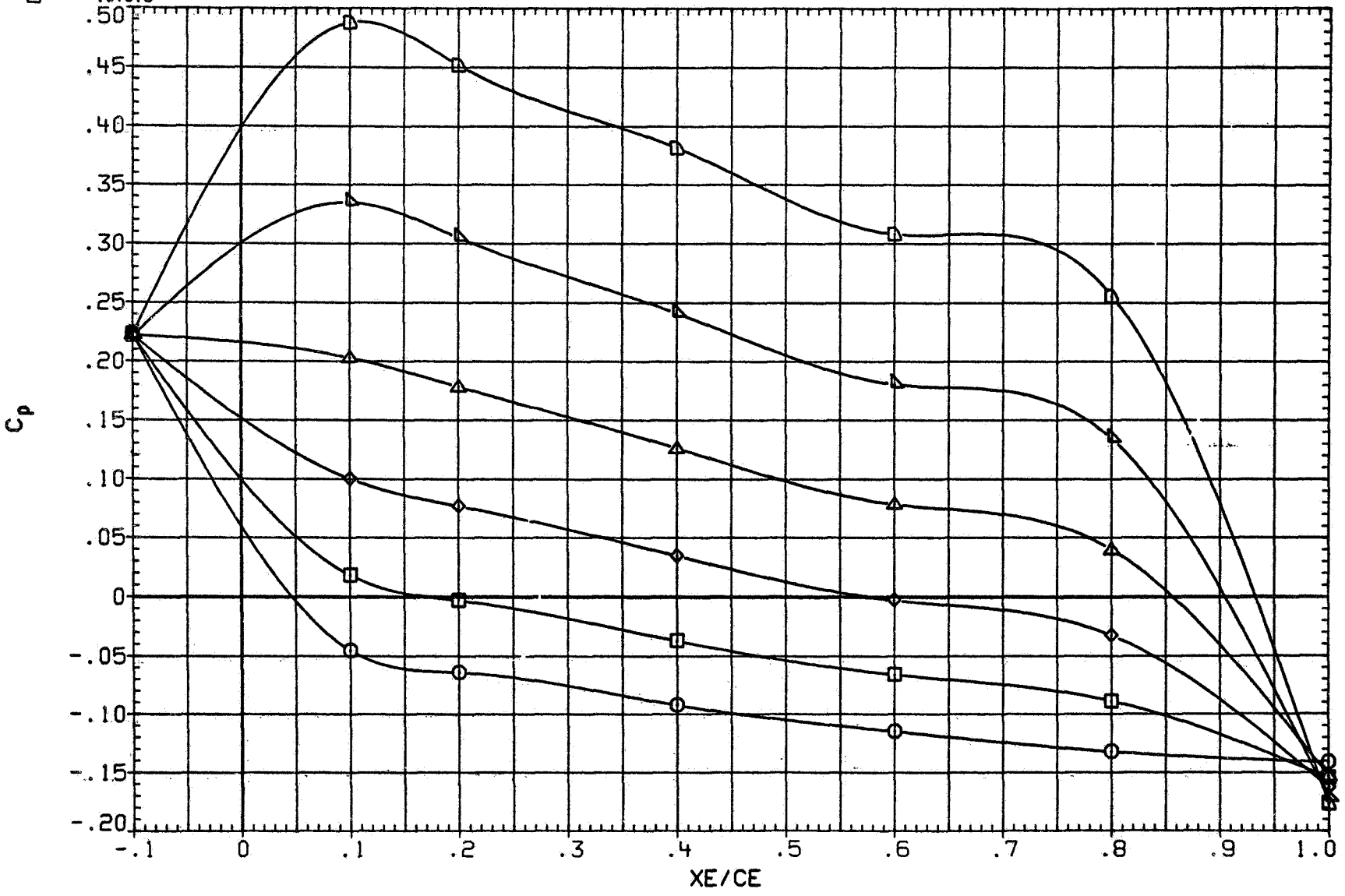


FIG.58 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

FIG.58 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC20) AMES 118-1-11 0A145C 01 ELEVON IB I DWER

SYMBOL	ELEVON	2Y/BW	MACH
O	-14.966	.427	3.000
□	-9.946		
◇	-4.933		
△	.041		
⊿	5.002		
D	10.026		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

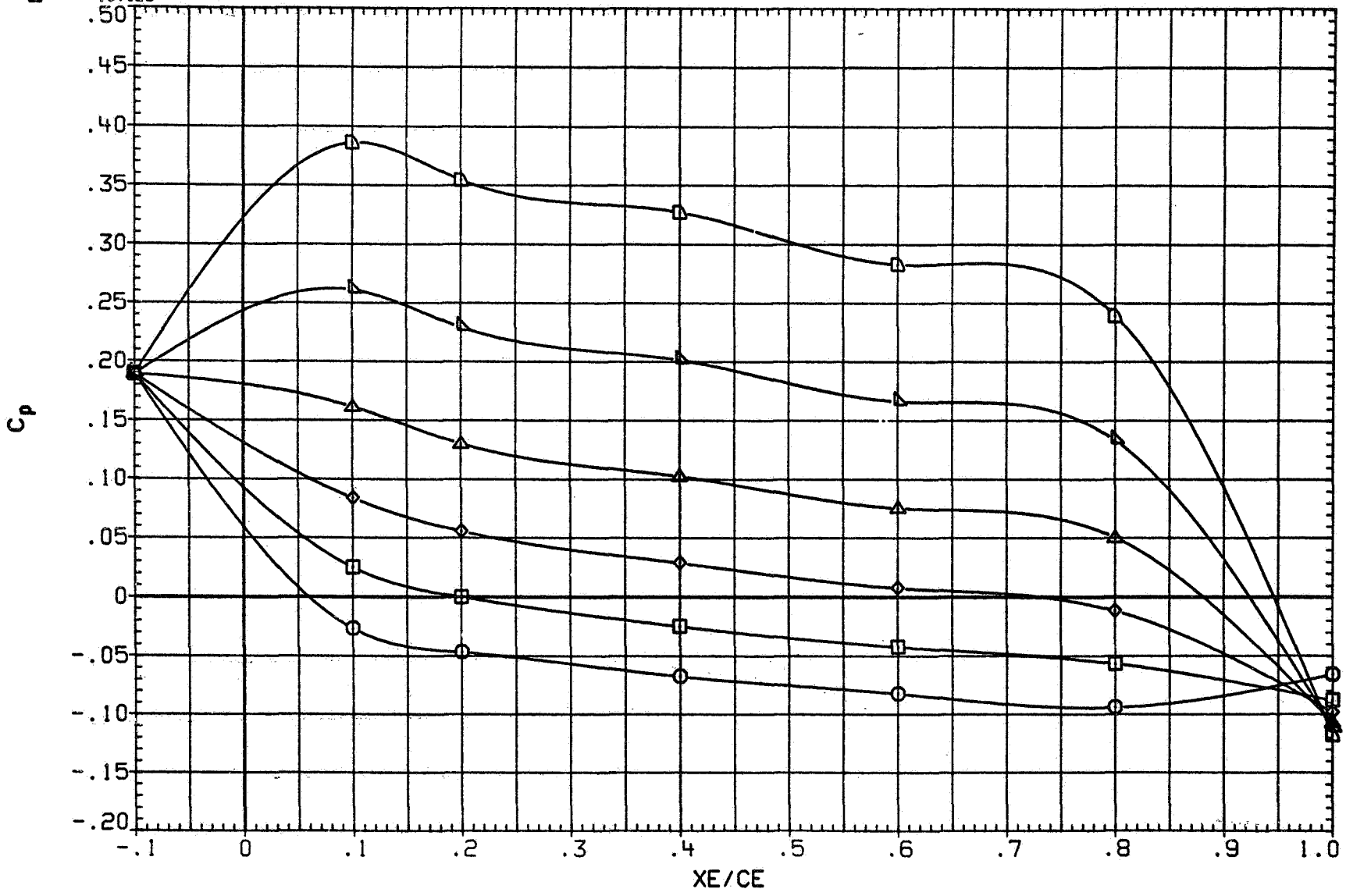


FIG.58 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC20) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.966	.534	3.000
□	-9.946		
◇	-4.933		
△	.041		
◁	5.002		
D	10.026		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

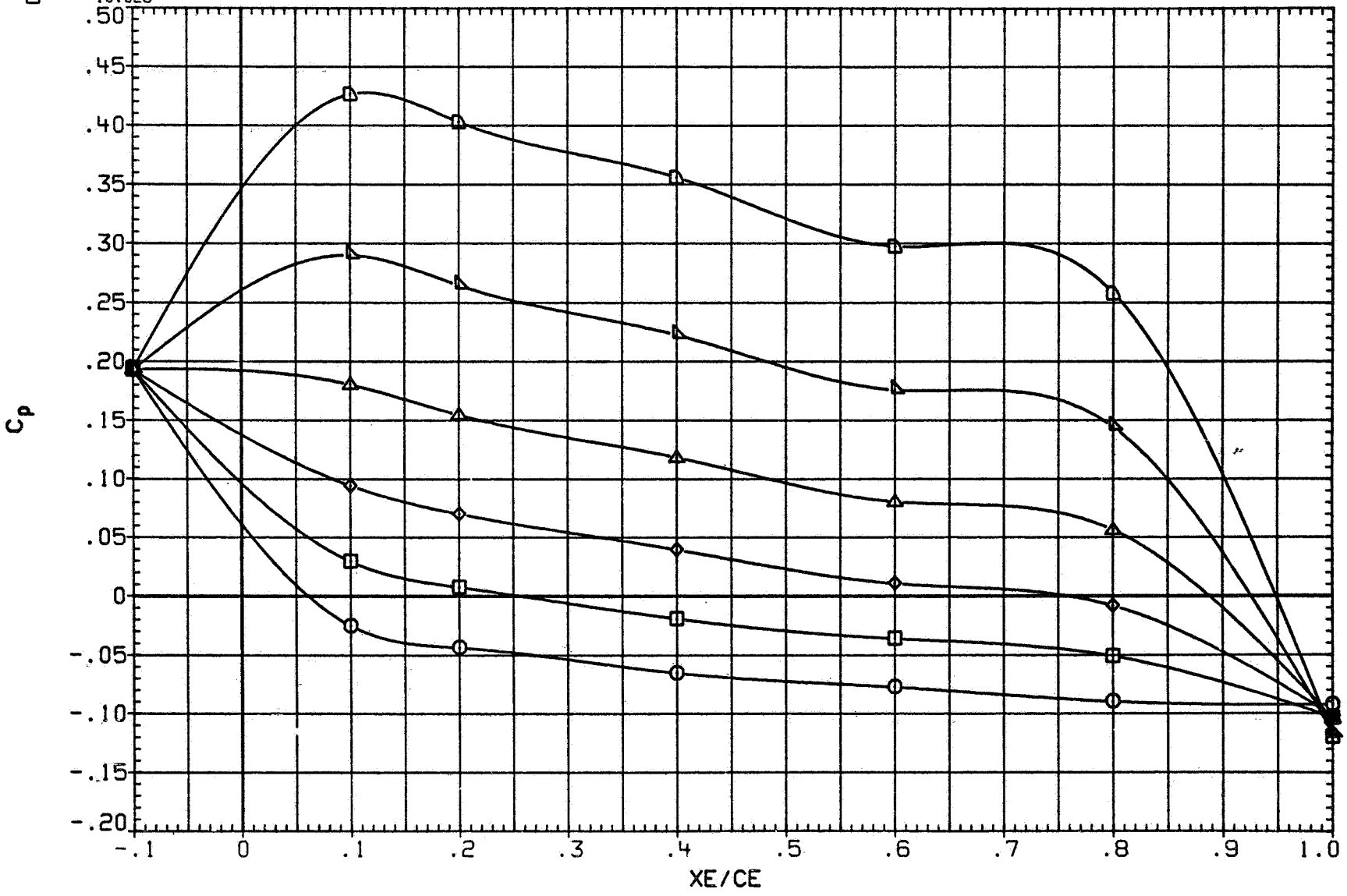


FIG.58 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC20) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.966	.615	3.000
□	-9.946		
◇	-4.933		
△	.041		
◁	5.002		
▷	10.026		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

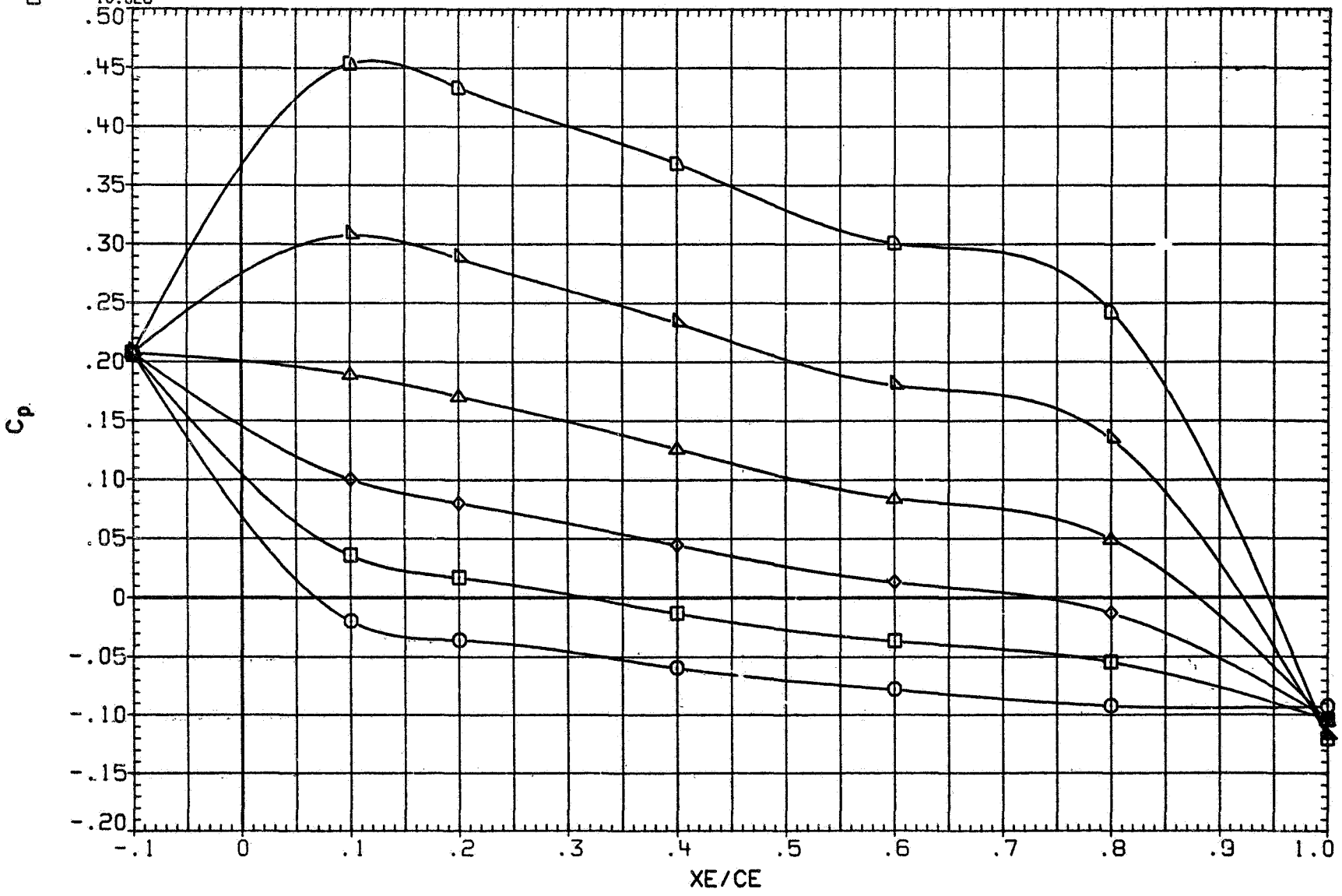


FIG.58 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC20) AMES 118-1-11 0A145C 01 ELEVON IB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.935	.340	3.498
□	-9.941		
◇	-4.943		
△	.029		
◁	5.039		
D	10.019		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

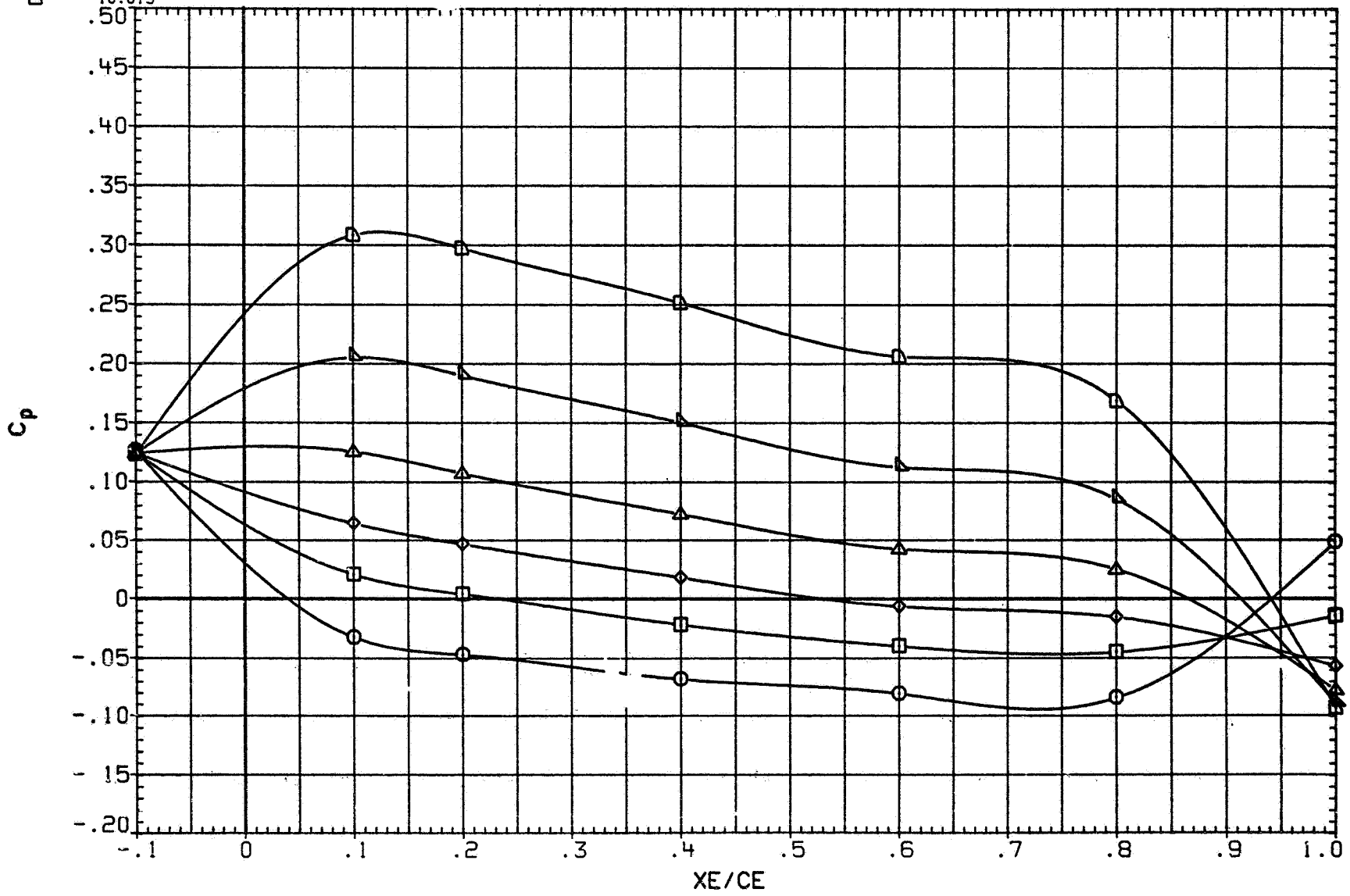


FIG.58 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC20) AMES 118-1-11 0A145C 01 ELEVON IB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.935	.427	3.498
□	-9.941		
◇	-4.943		
△	.029		
▷	5.039		
D	10.019		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

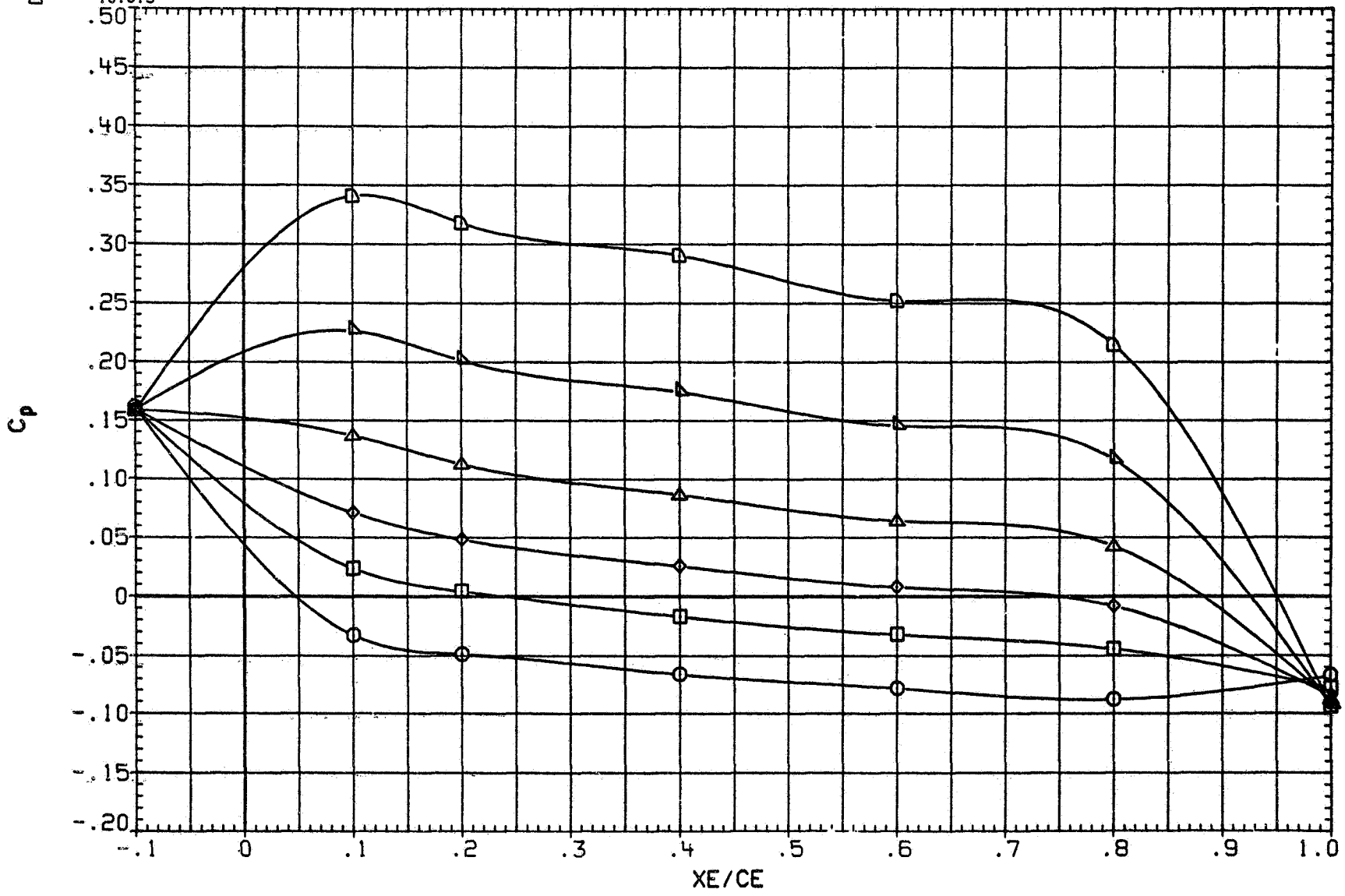


FIG.58 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC20) AMES 118-1-11 0A145C 01

ELEVON IB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.935	.534	3.498
□	-9.941		
◇	-4.943		
△	.029		
▷	5.039		
D	10.019		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

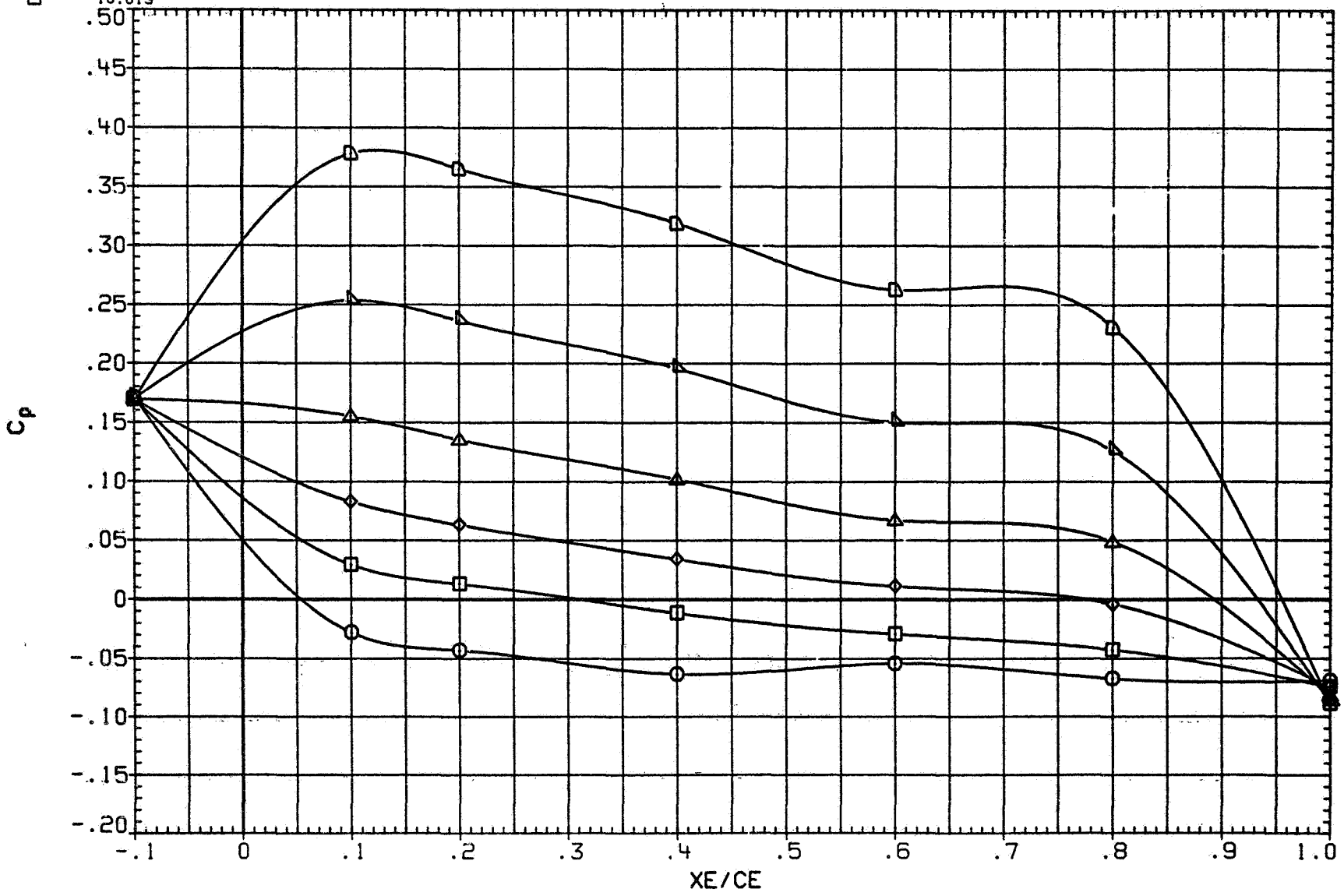


FIG.58 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC20) AMES 118-1-11 OA145C 01

ELEVON IB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.935	.615	3.498
□	-9.941		
◇	-4.943		
△	.029		
◁	5.039		
▷	10.019		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

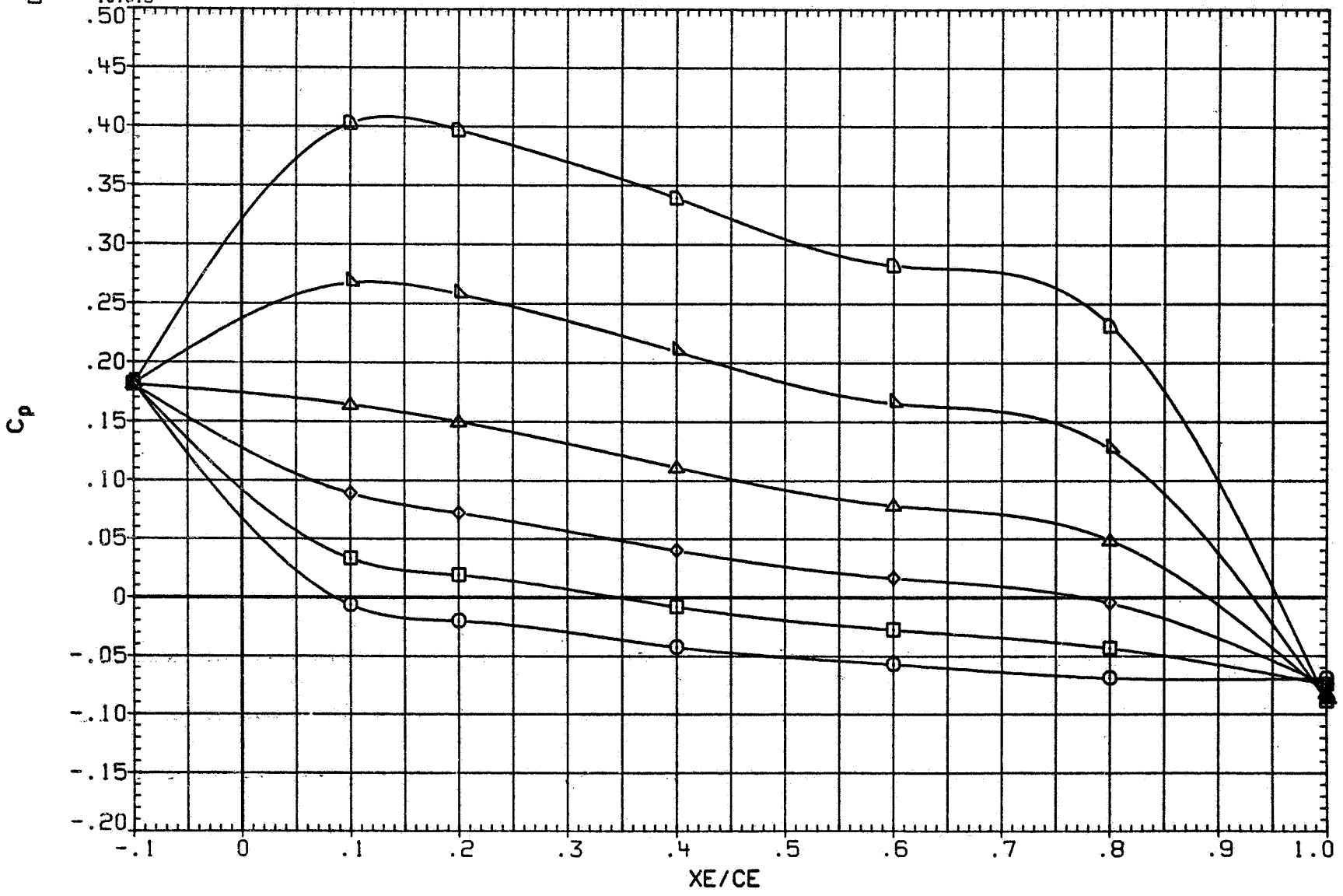


FIG.58 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HC13) AMES 118-1-11 0A145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.340	3.000
□	4.933		
◇	10.065		
△	15.160		
◁	20.226		
▷	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

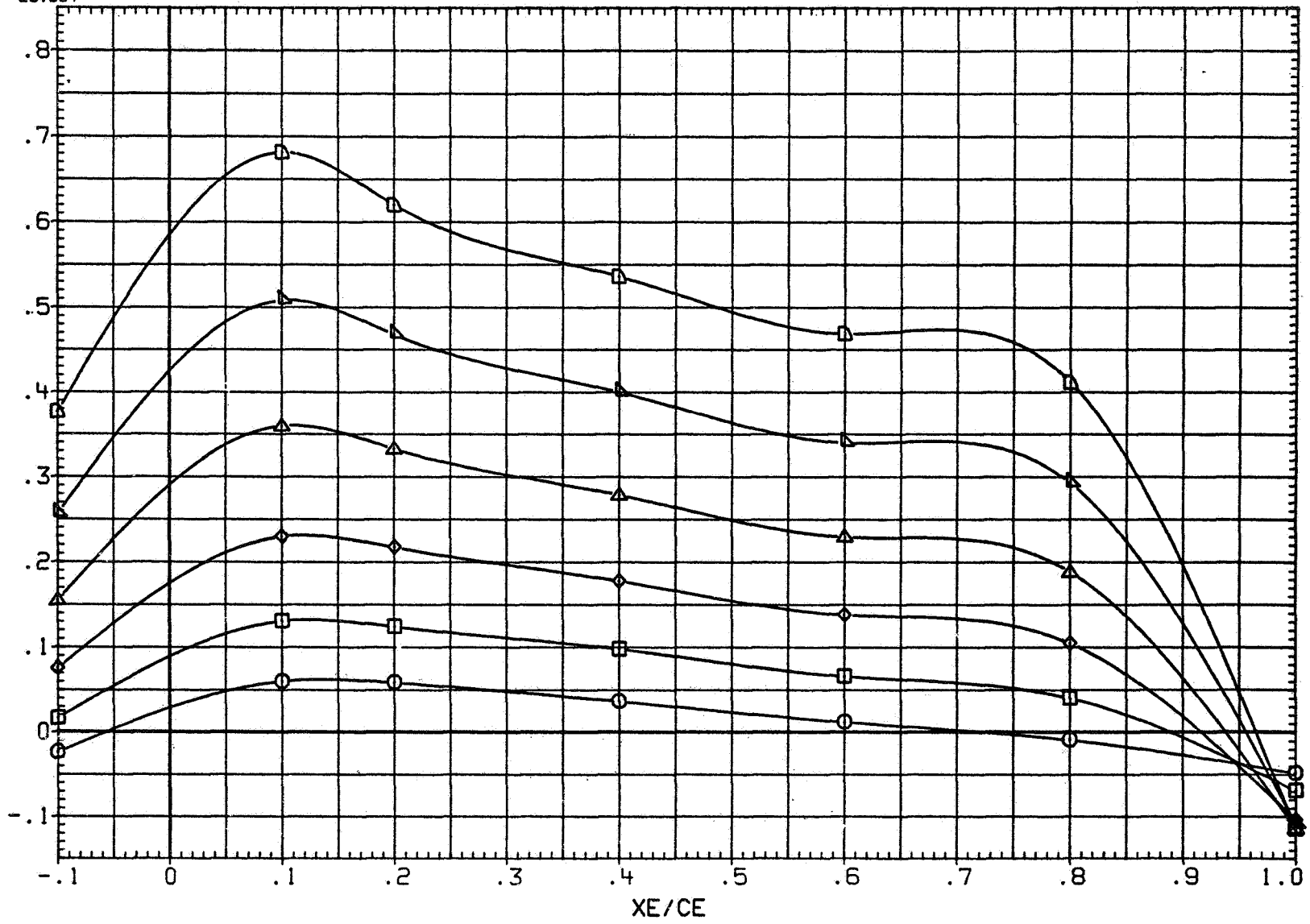


FIG.59 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HC13) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.427	3.000
□	4.933		
◇	10.065		
△	15.160		
◁	20.226		
D	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

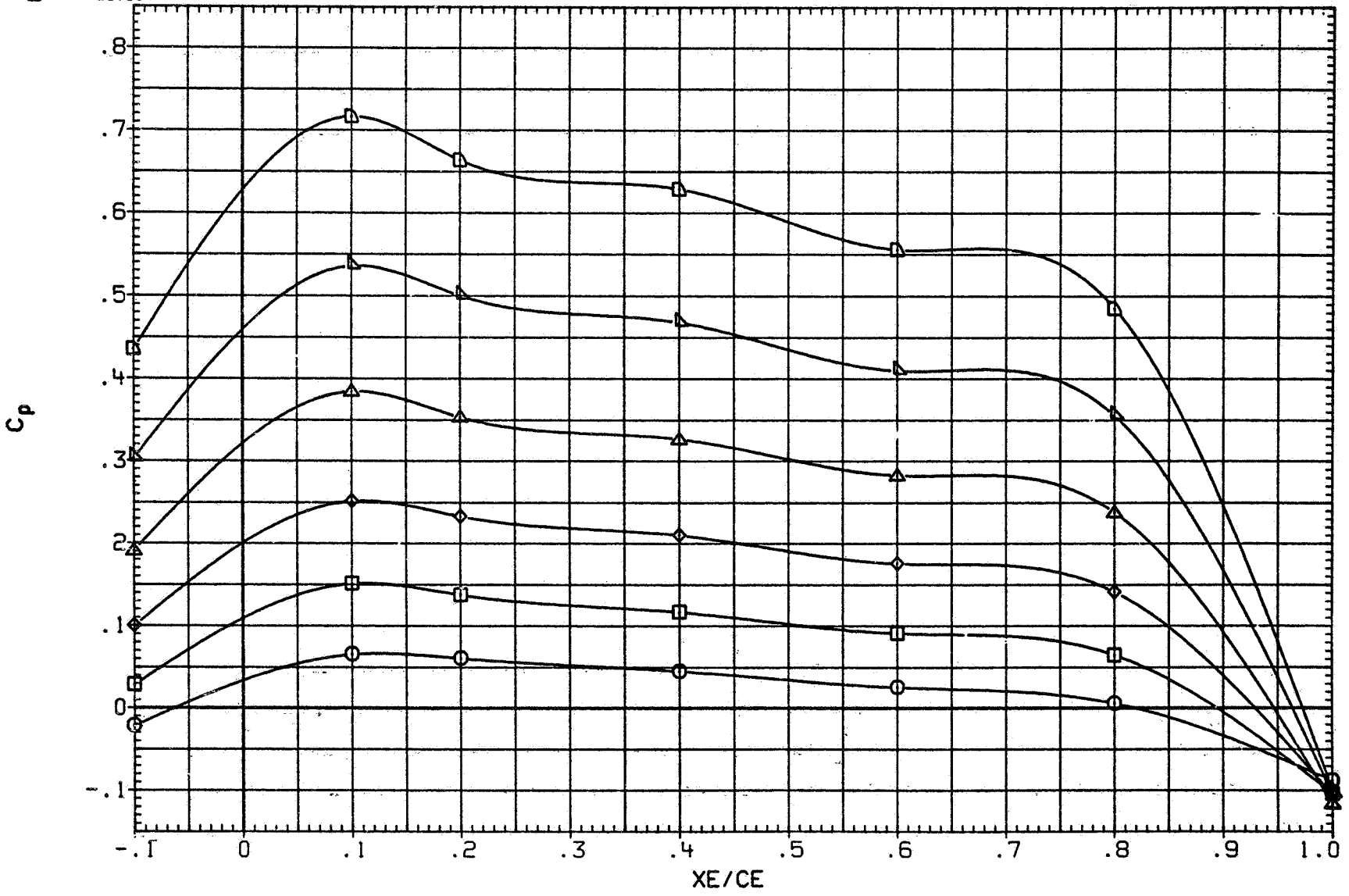


FIG.59 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HC13) AMES 118-1-11 0A145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.534	3.000
□	4.933		
◇	10.065		
△	15.160		
◸	20.226		
◺	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

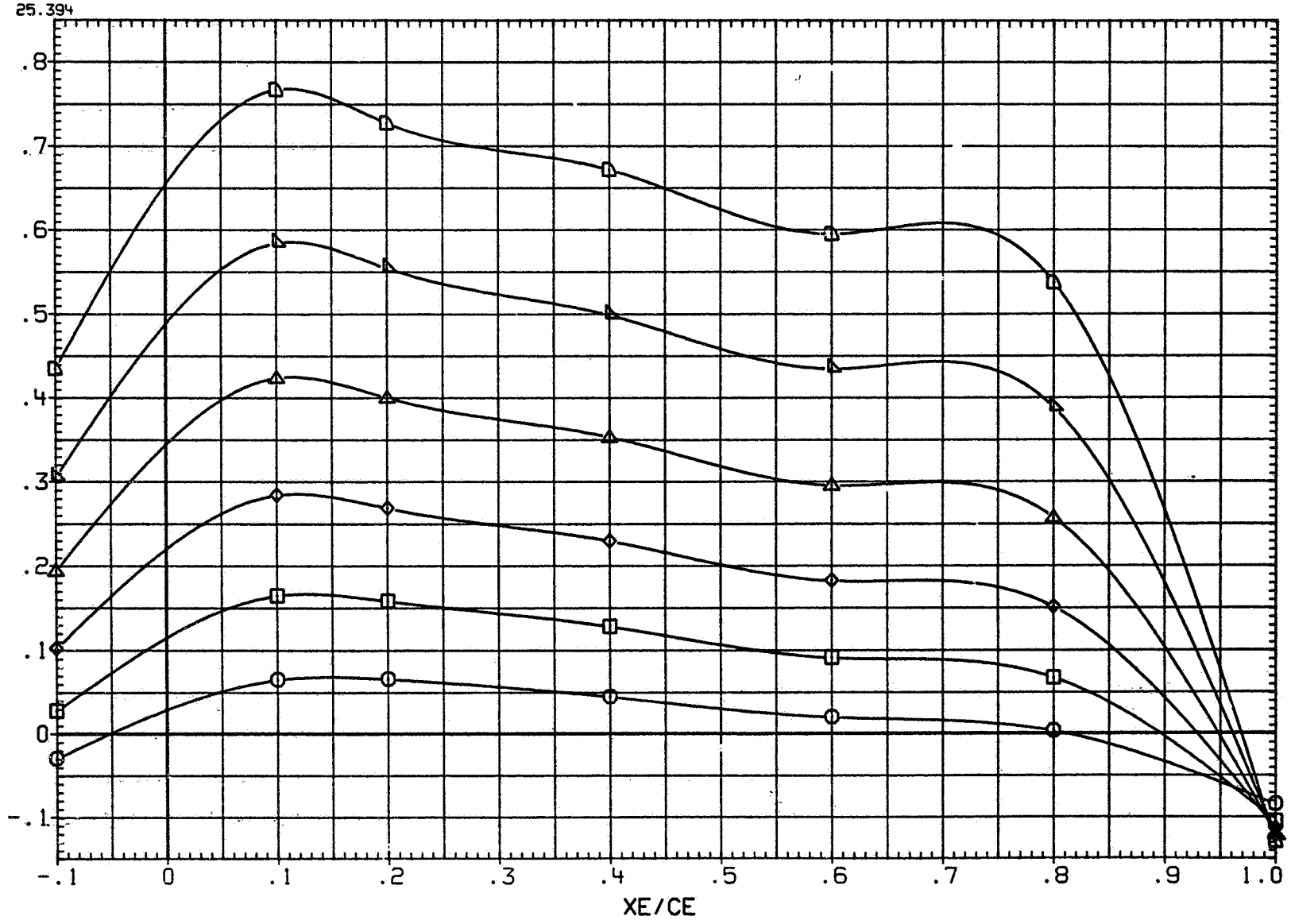


FIG.59 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HC13) AMES 118-1-11 0A145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.615	3.000
□	4.933		
◇	10.065		
△	15.160		
◁	20.226		
▷	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

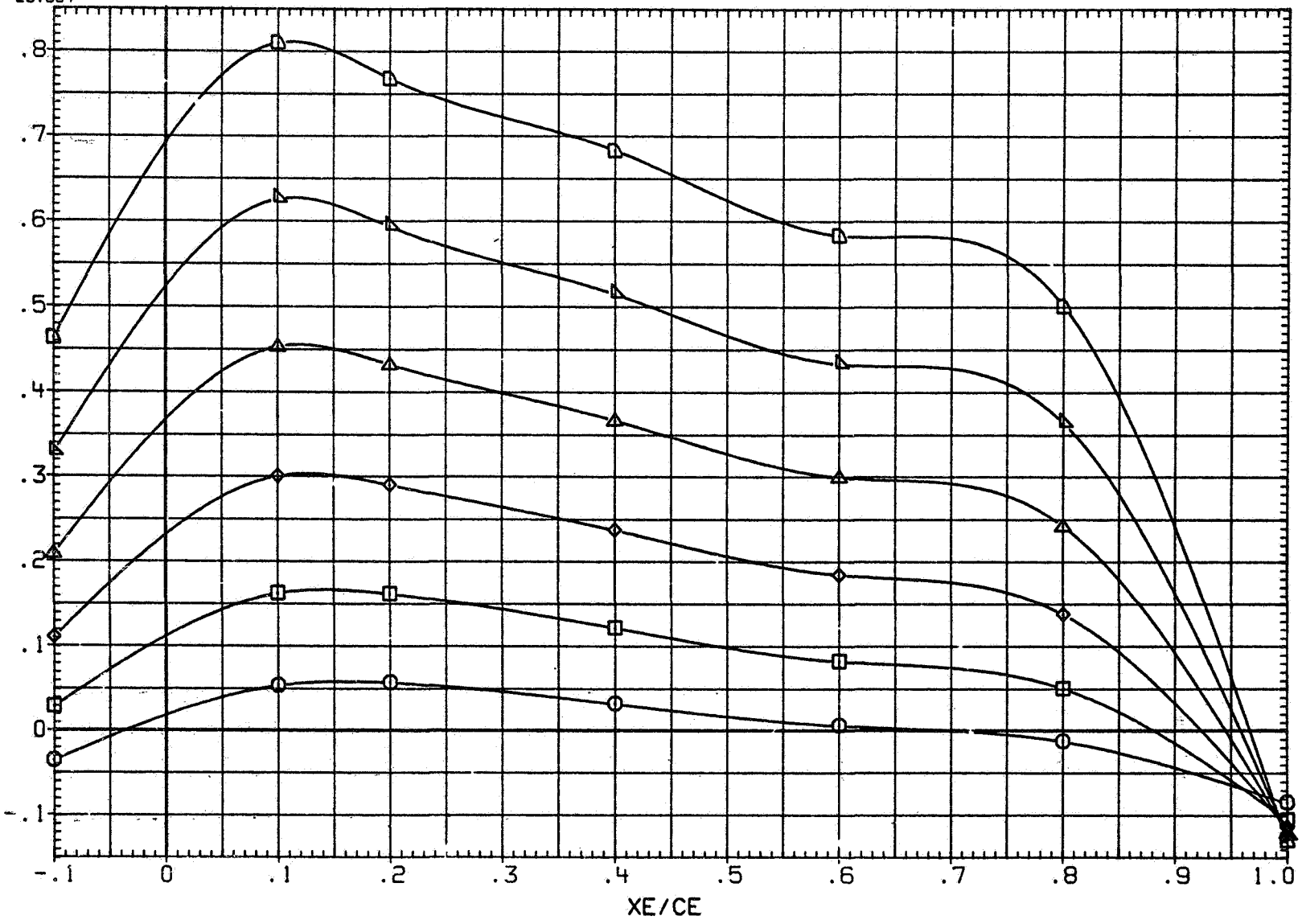


FIG.59 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HC16) AMES 118-1-11 0A145C 01

ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.189	.340	3.001
□	5.024		
◇	10.117		
△	15.226		
◁	20.285		
▷	25.372		

PARAMETRIC VALUES

BETA	.000	ELEVON	-10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

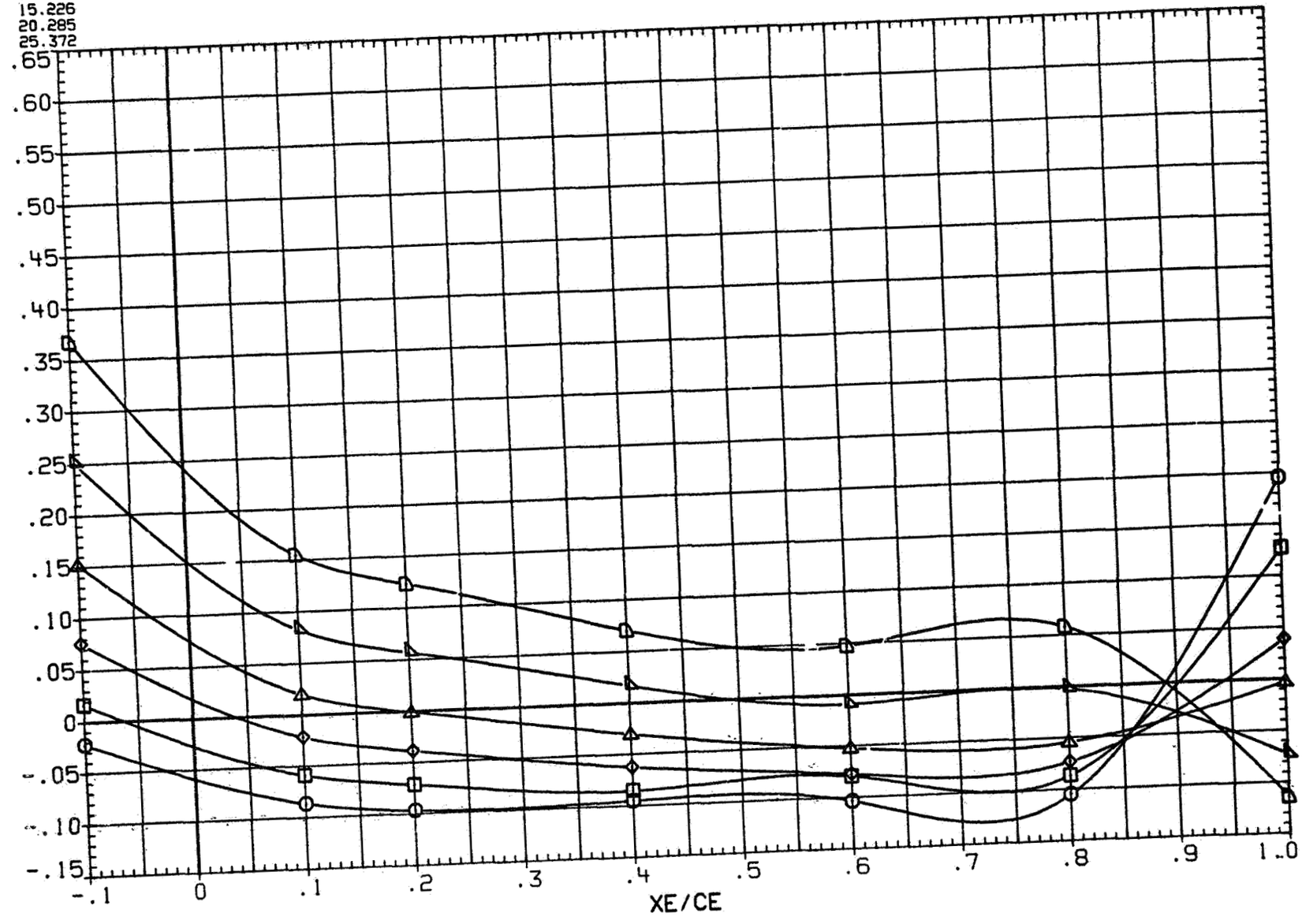


FIG.60 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

(R2HC16) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.189	.427	3.001
□	5.024		
◇	10.117		
△	15.226		
◁	20.285		
▷	25.372		

PARAMETRIC VALUES

BETA	.000	ELEVON	-10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

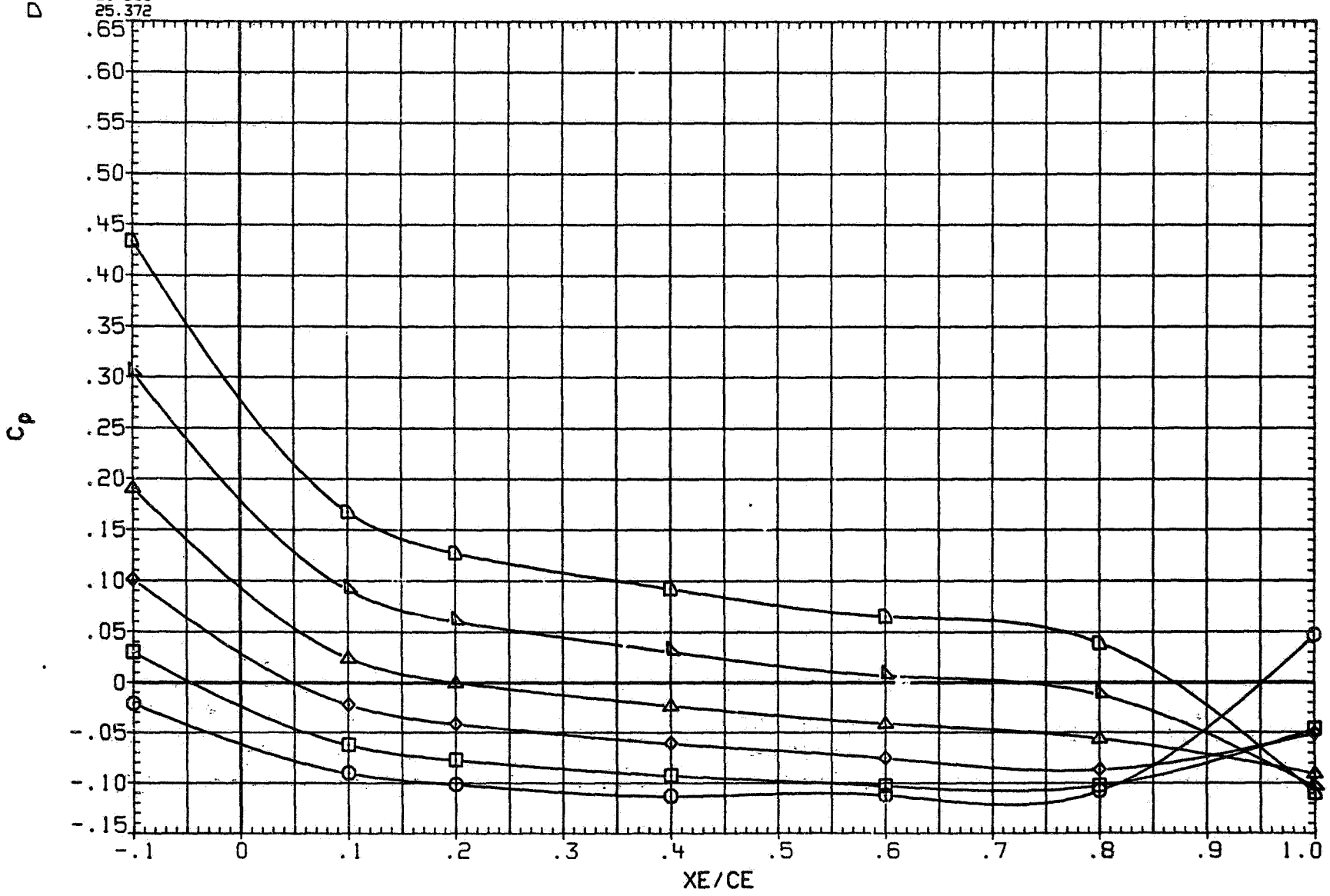


FIG.60 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

(R2HC16) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.189	.534	3.001
□	5.024		
◇	10.117		
△	15.226		
◁	20.285		
▷	25.372		

PARAMETRIC VALUES

BETA	.000	ELEVON	-10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

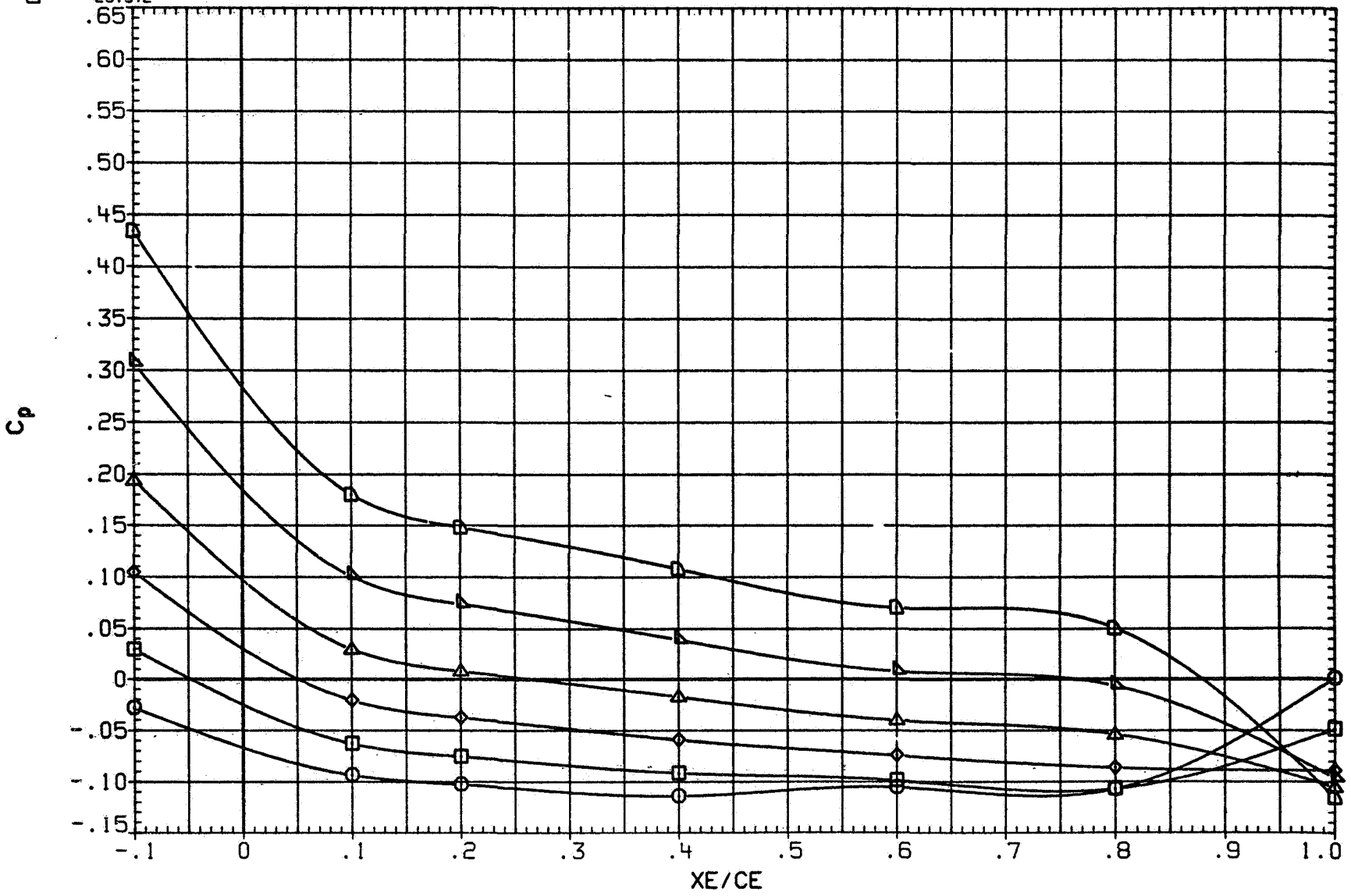


FIG.60 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

(R2HC16) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.189	.615	3.001
□	5.024		
◇	10.117		
△	15.226		
◁	20.285		
▷	25.372		

PARAMETRIC VALUES

BETA	.000	ELEVON	-10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

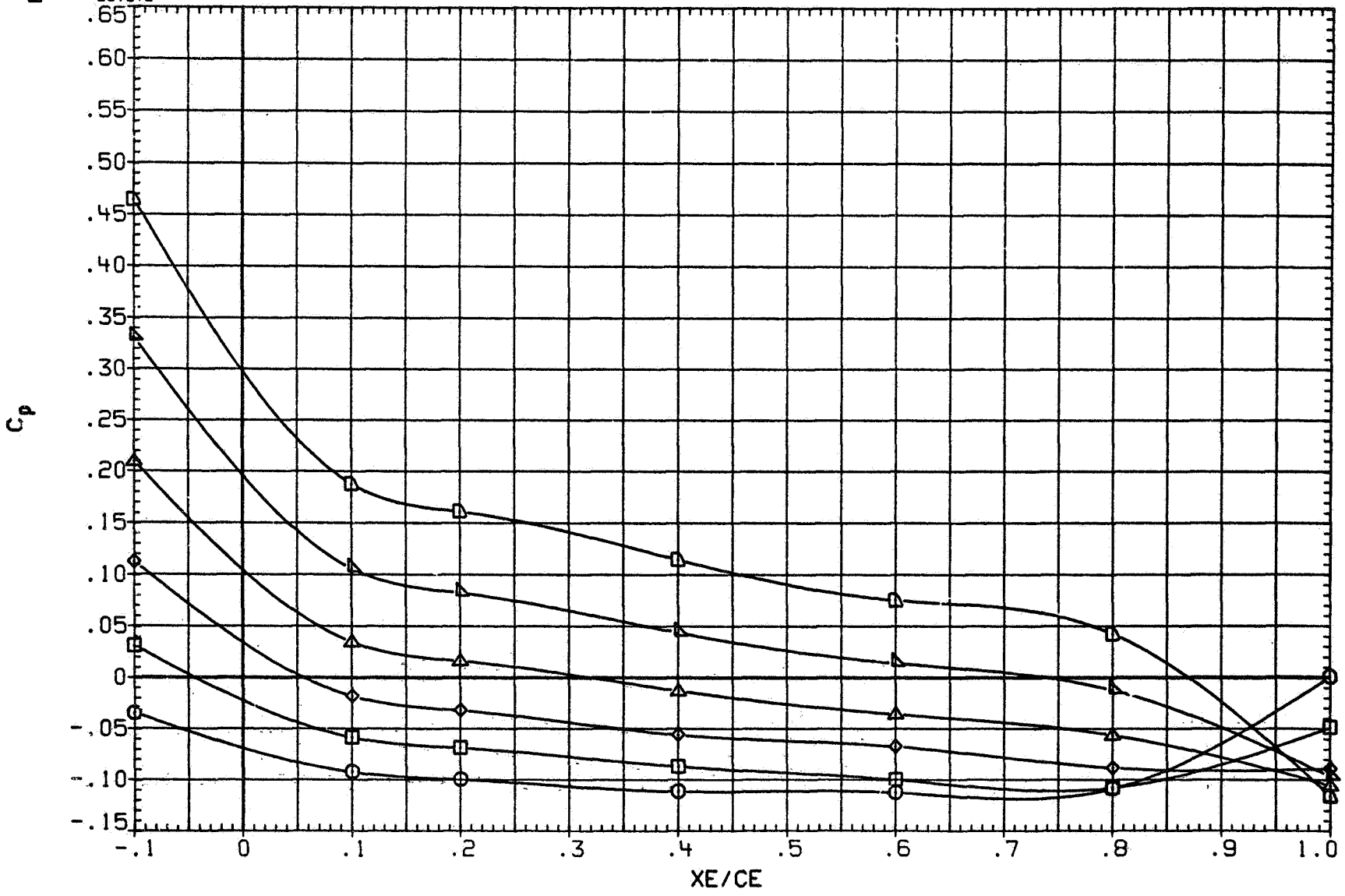


FIG.60 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

(R2HC14) AMES 118-1-11 OA145C 01

ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.181	.340	3.000
□	4.954		
◇	10.066		
△	15.156		
◁	20.228		
D	25.389		

PARAMETRIC VALUES

BETA	.000	ELEVON	20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

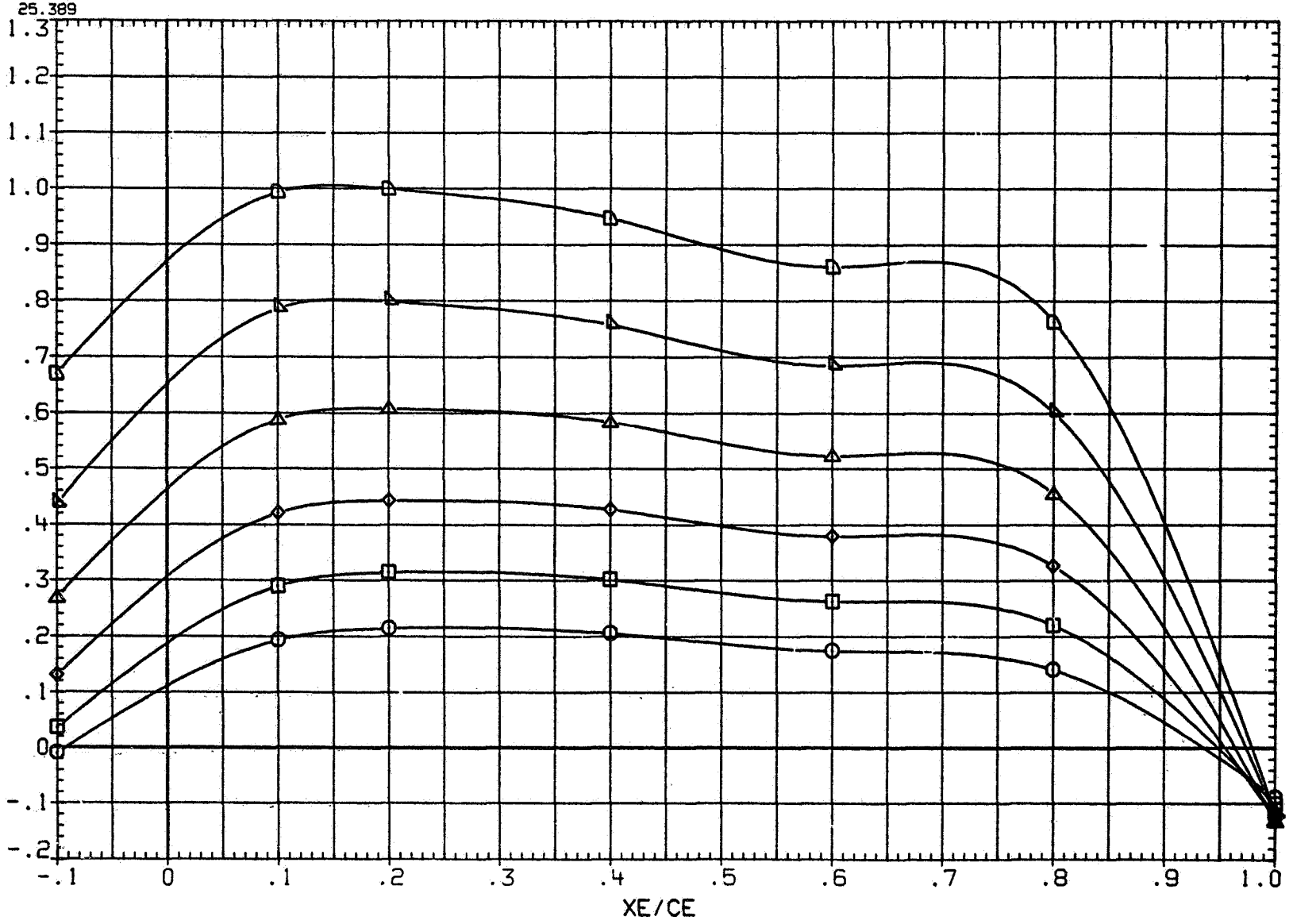


FIG.61 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

(R2HC14) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.181	.427	3.000
□	4.954		
◇	10.066		
△	15.156		
▷	20.228		
▱	25.389		

PARAMETRIC VALUES

BETA	.000	ELEVON	20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

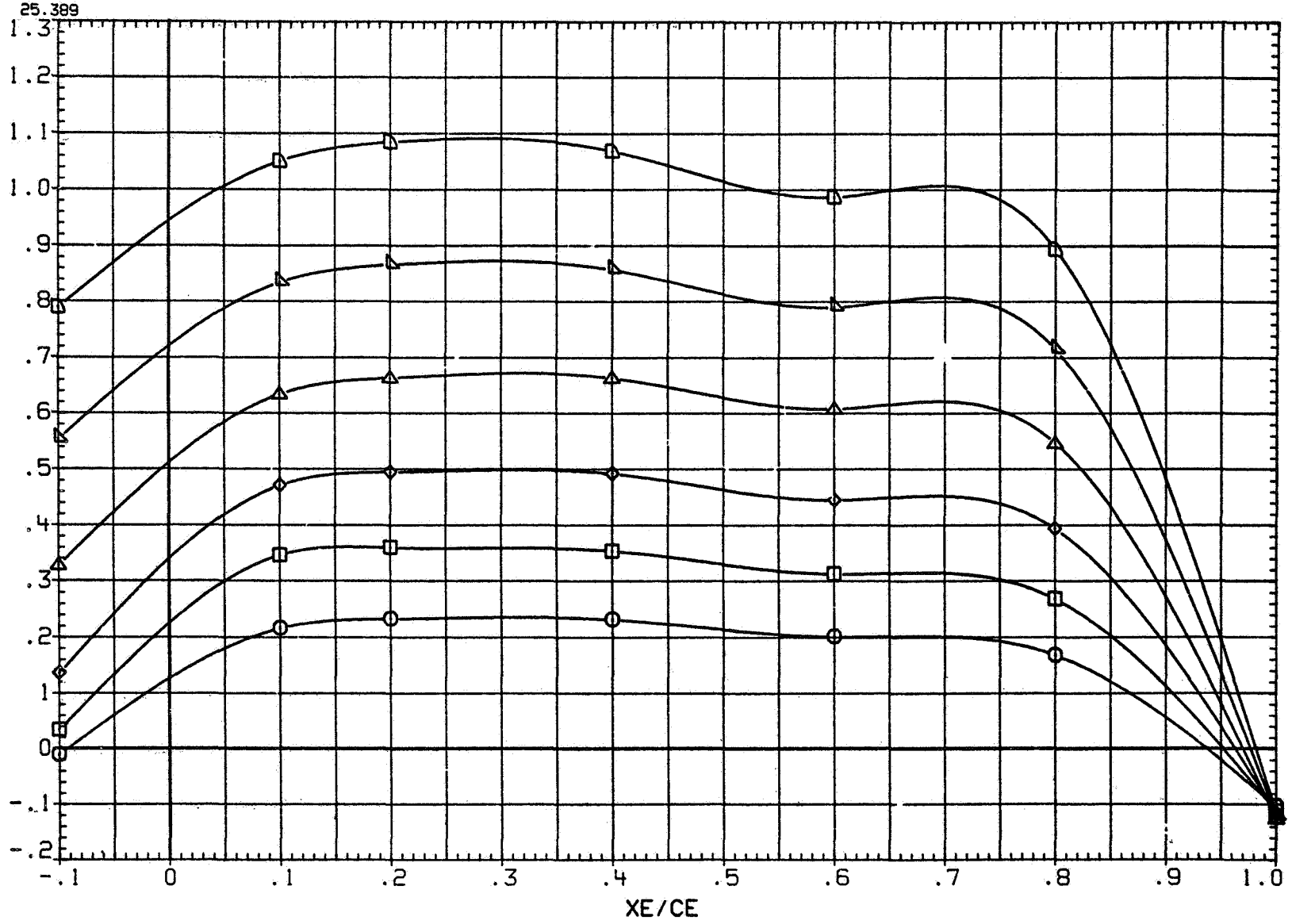


FIG.61 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

(R2HC14) AMES 118-1-11 0A145C 01

ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.181	.534	3.000
□	4.954		
◇	10.066		
△	15.156		
◁	20.228		
D	25.389		

PARAMETRIC VALUES

BETA	.000	ELEVON	20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

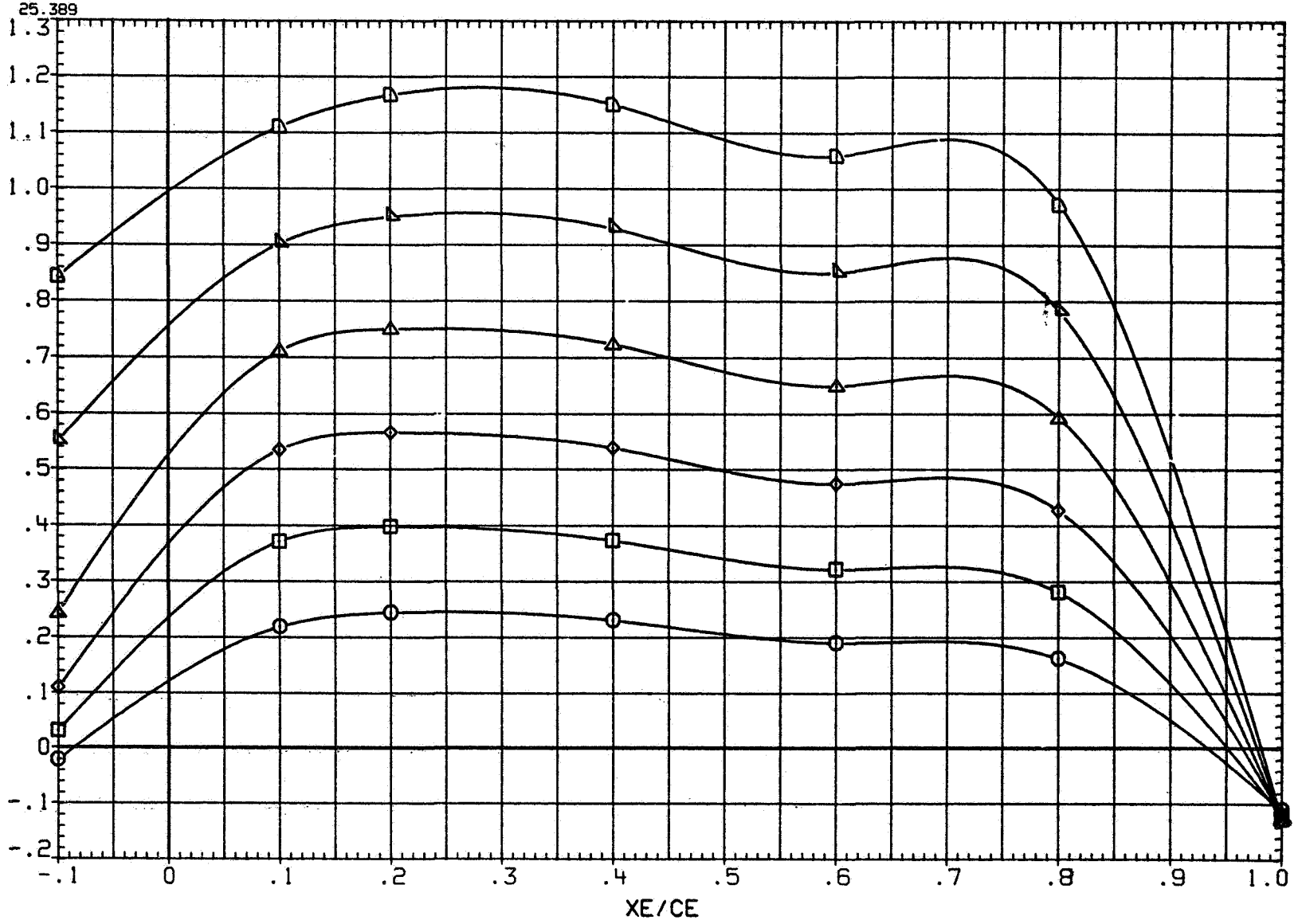


FIG.61 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

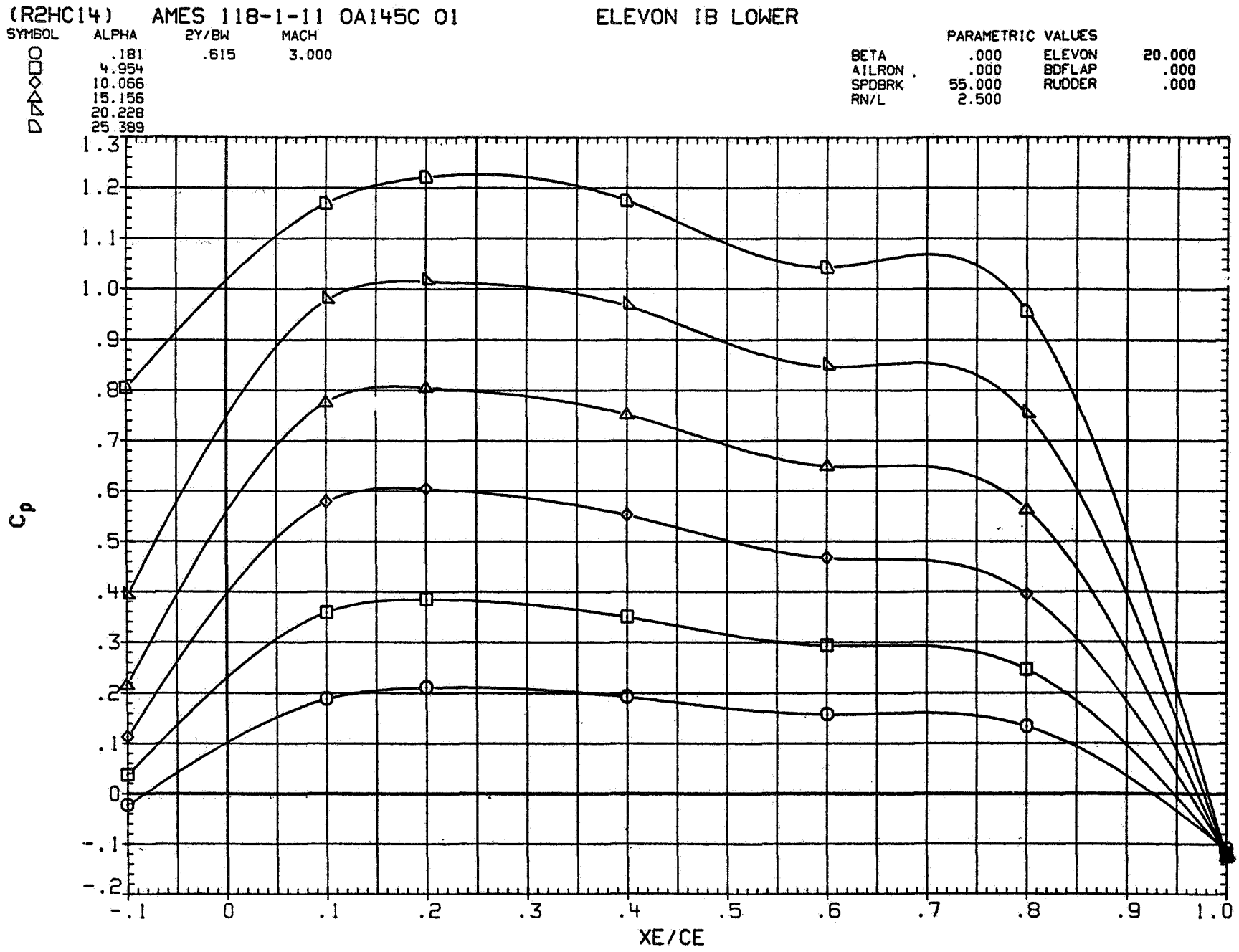


FIG.61 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

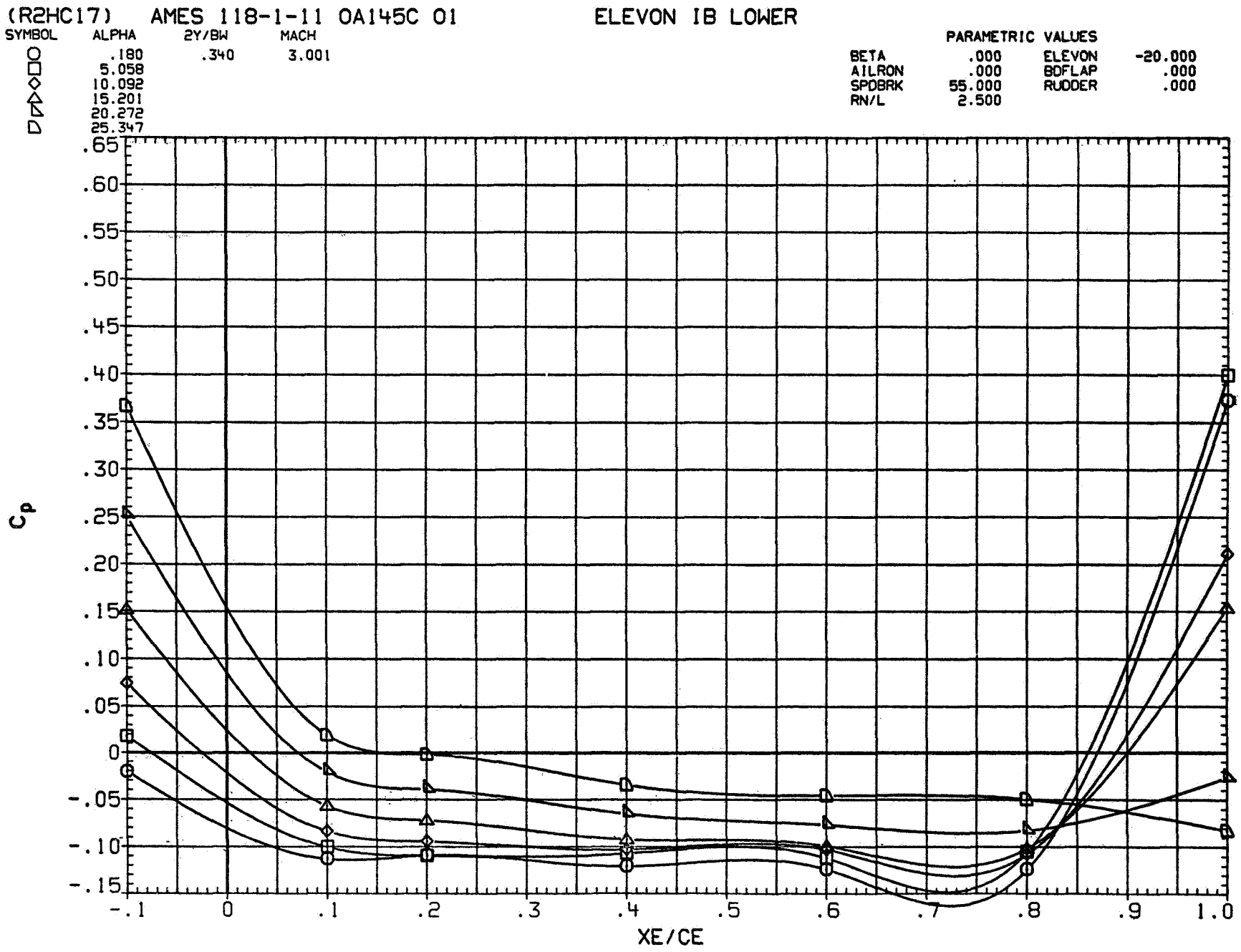


FIG.62 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

(R2HC17) AMES 118-1-11 0A145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.180	.427	3.001
□	5.058		
◇	10.092		
△	15.201		
◁	20.272		
▷	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

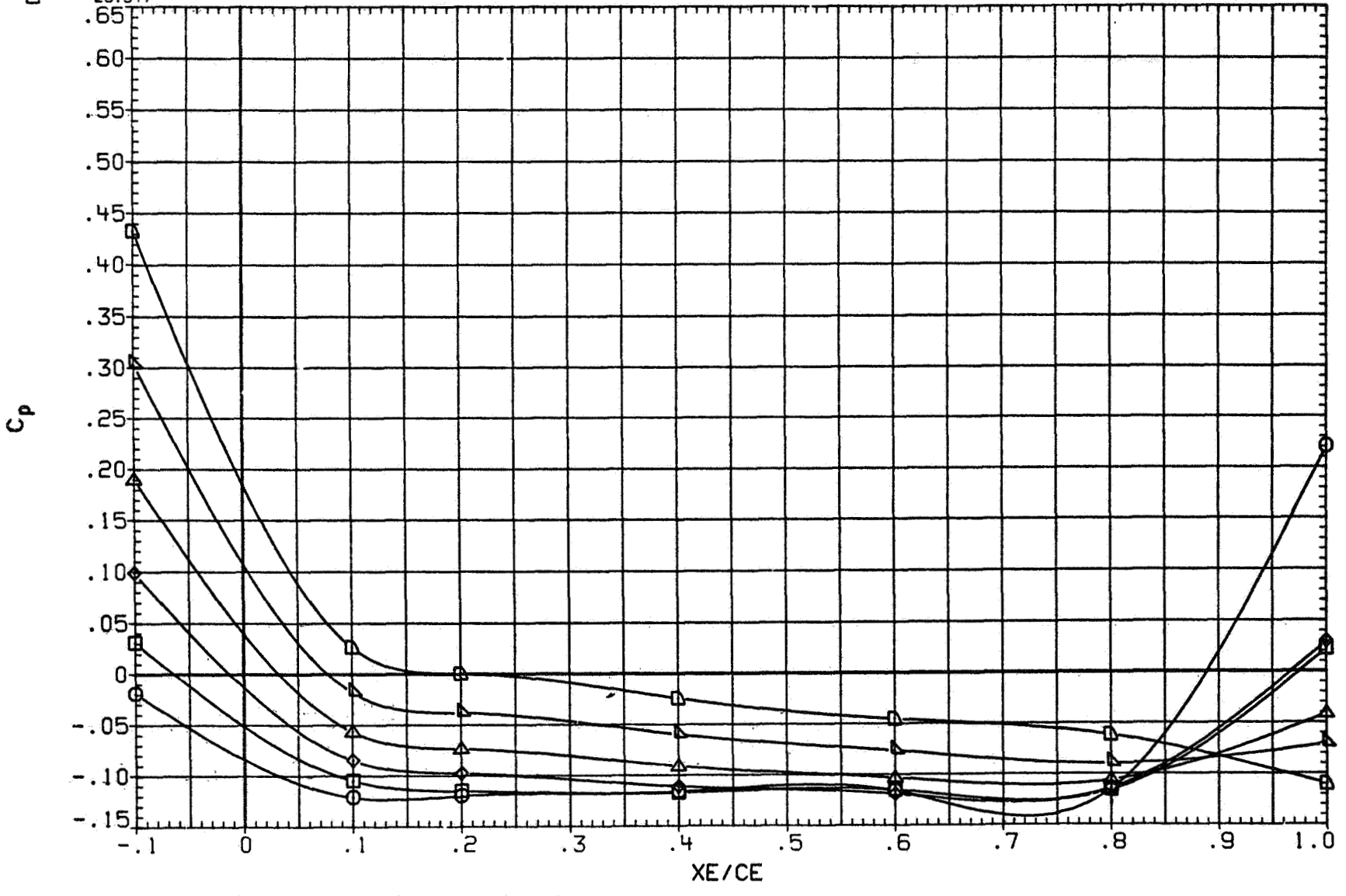


FIG.62 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

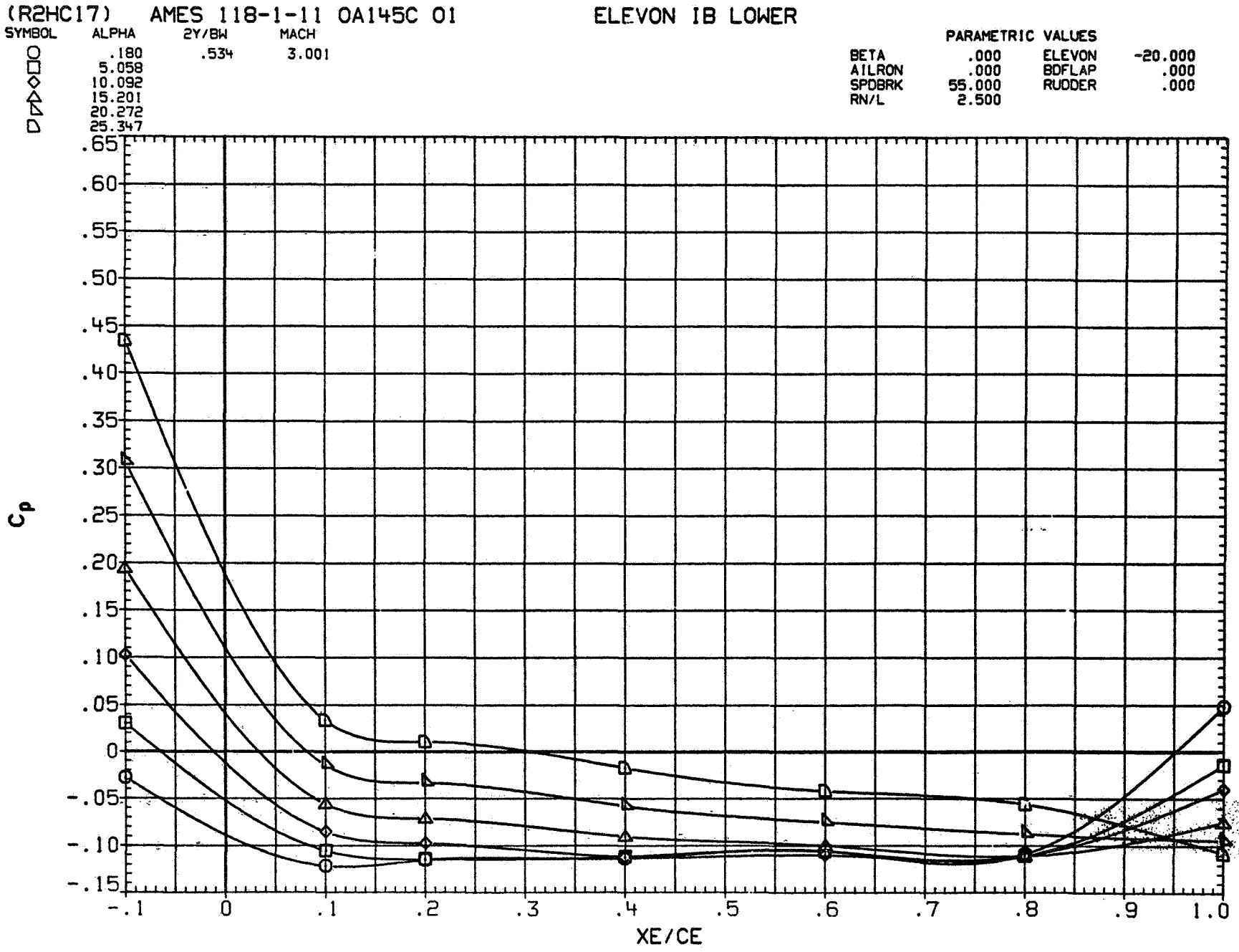


FIG.62 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

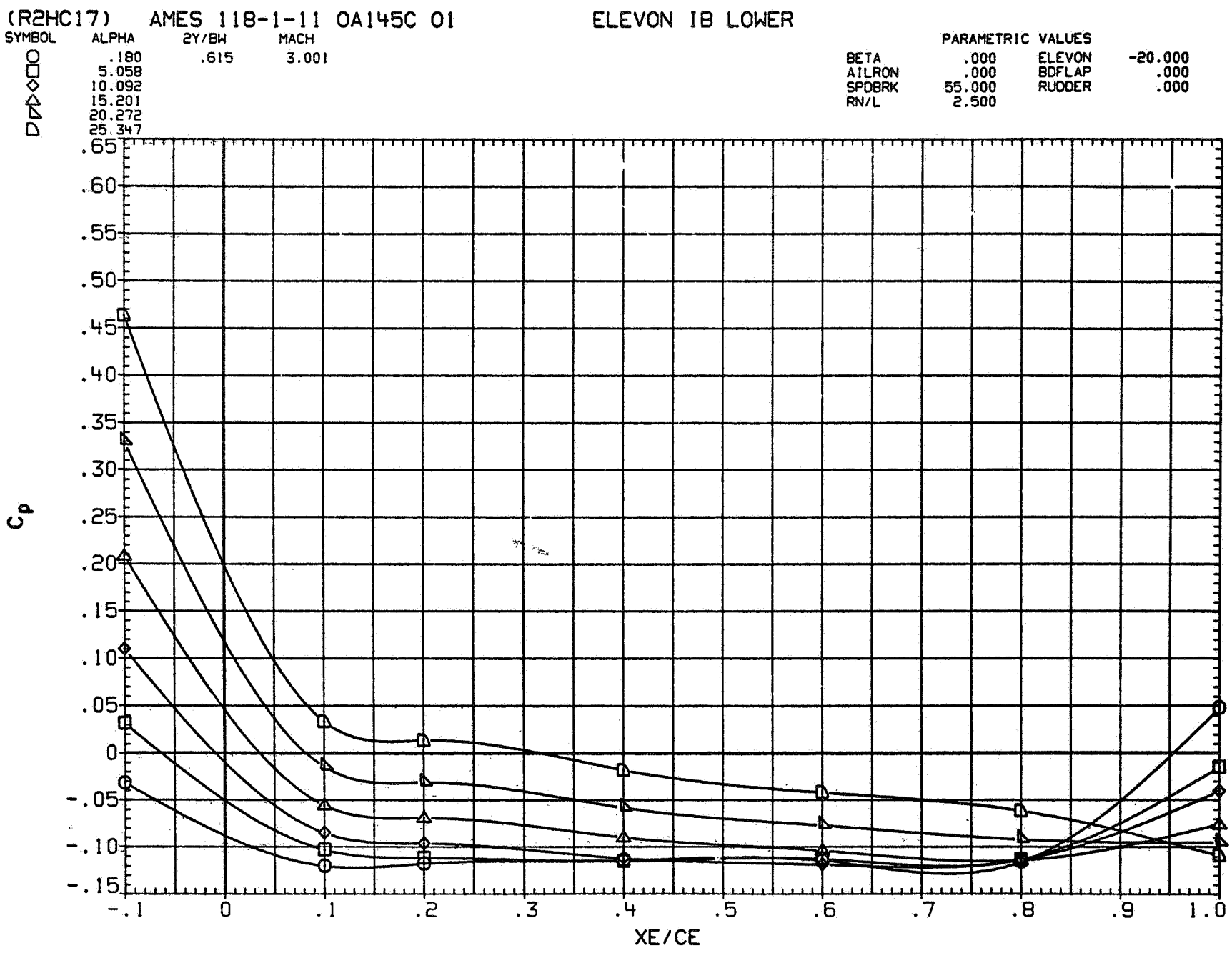


FIG.62 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

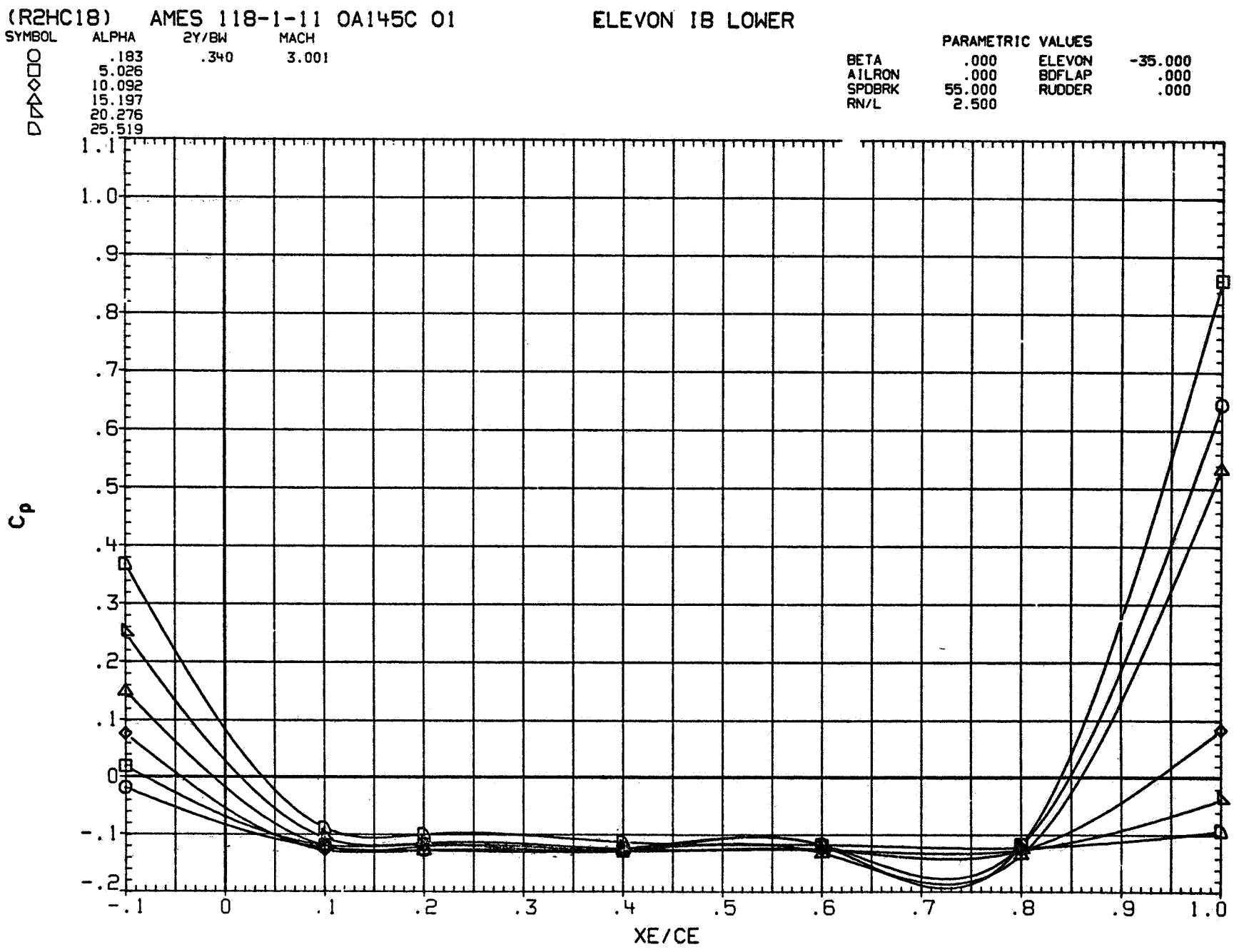


FIG.63 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

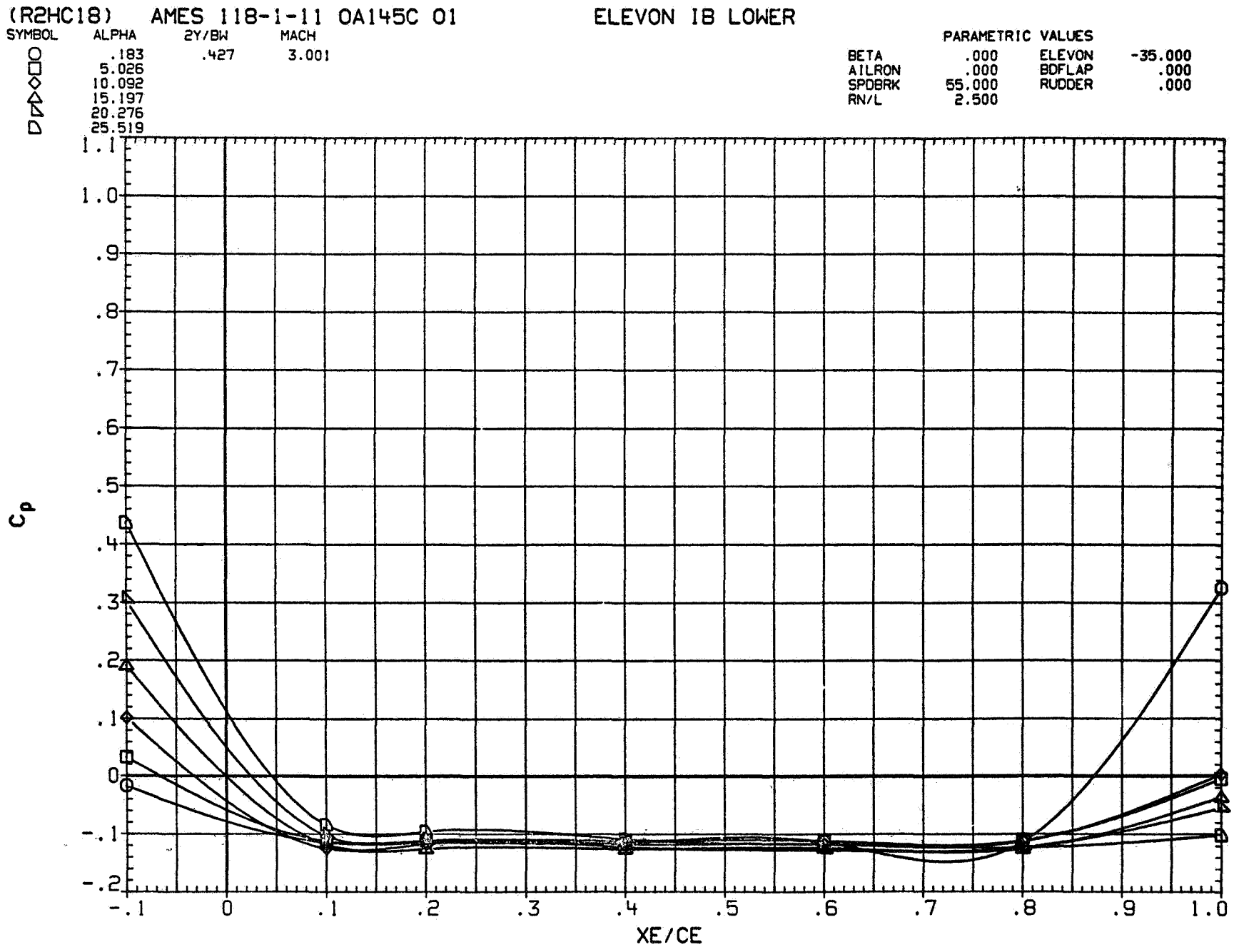


FIG.63 0A145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

(R2HC18) AMES 118-1-11 OA145C 01 ELEVON IB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.183	.534	3.001
□	5.026		
◇	10.092		
△	15.197		
◁	20.276		
▷	25.519		

PARAMETRIC VALUES

BETA	.000	ELEVON	-35.000
AILRON	.000	BOFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

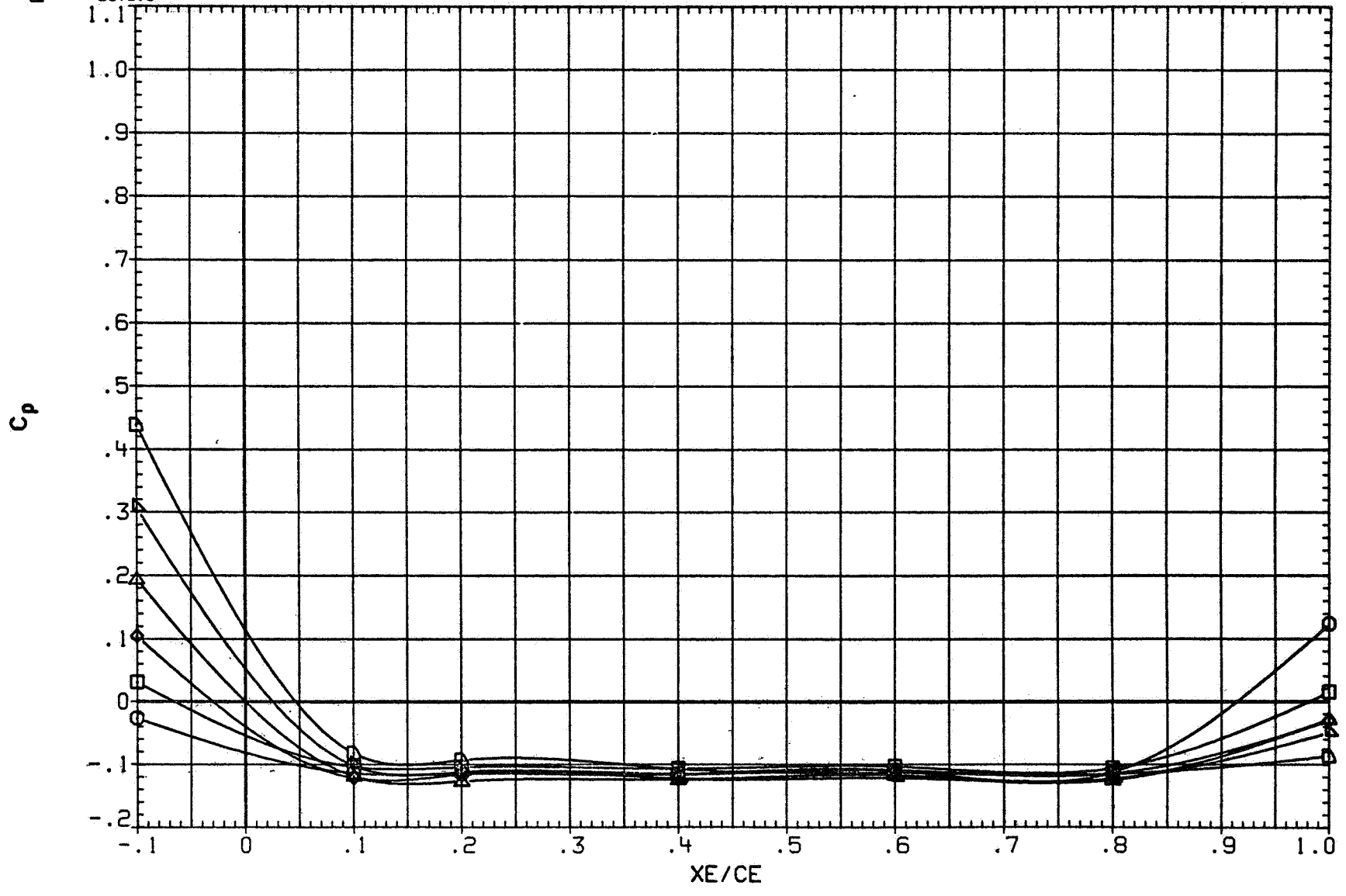


FIG.63 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

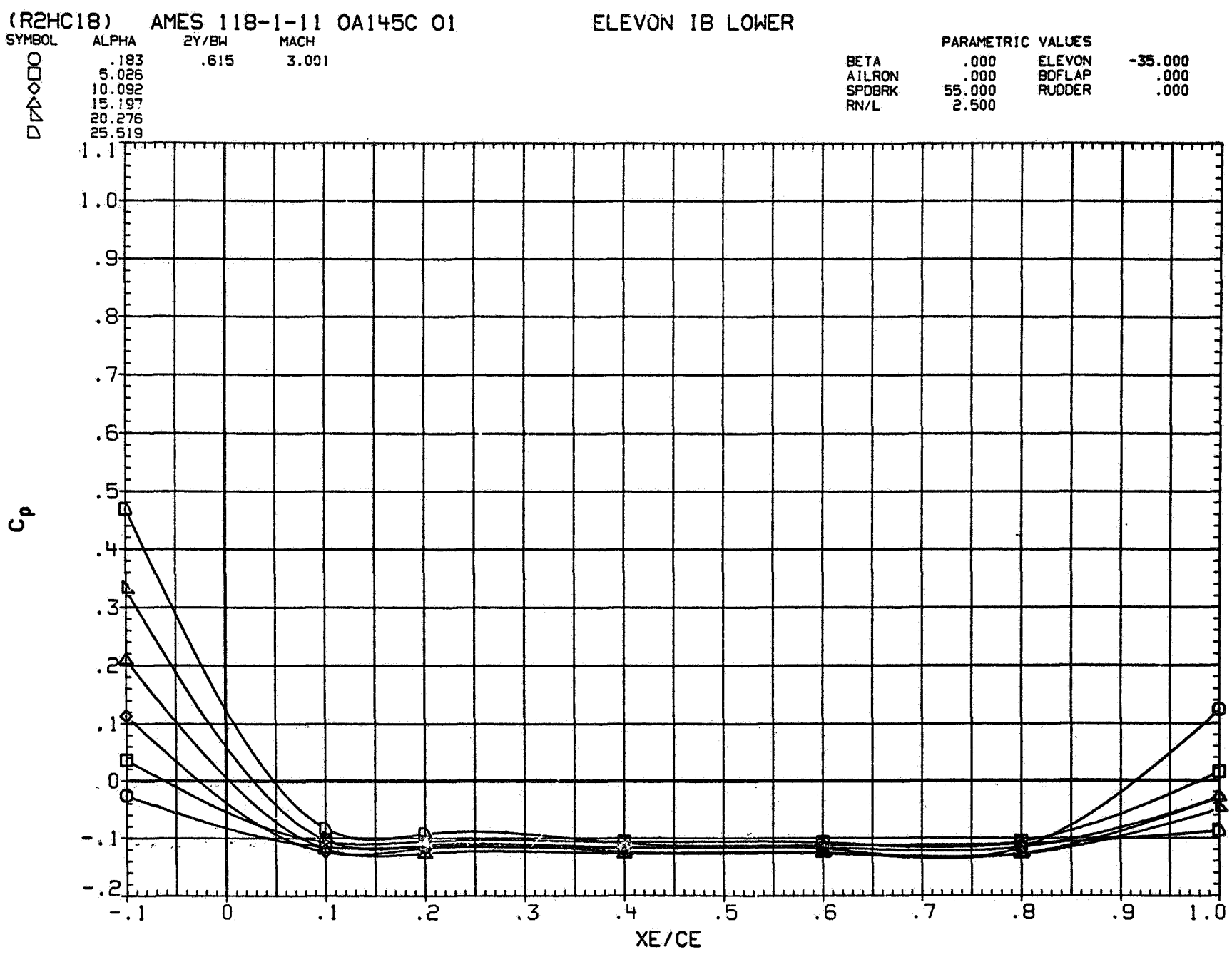


FIG.63 OA145C ELEVON CP VS. XE/CE
INBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

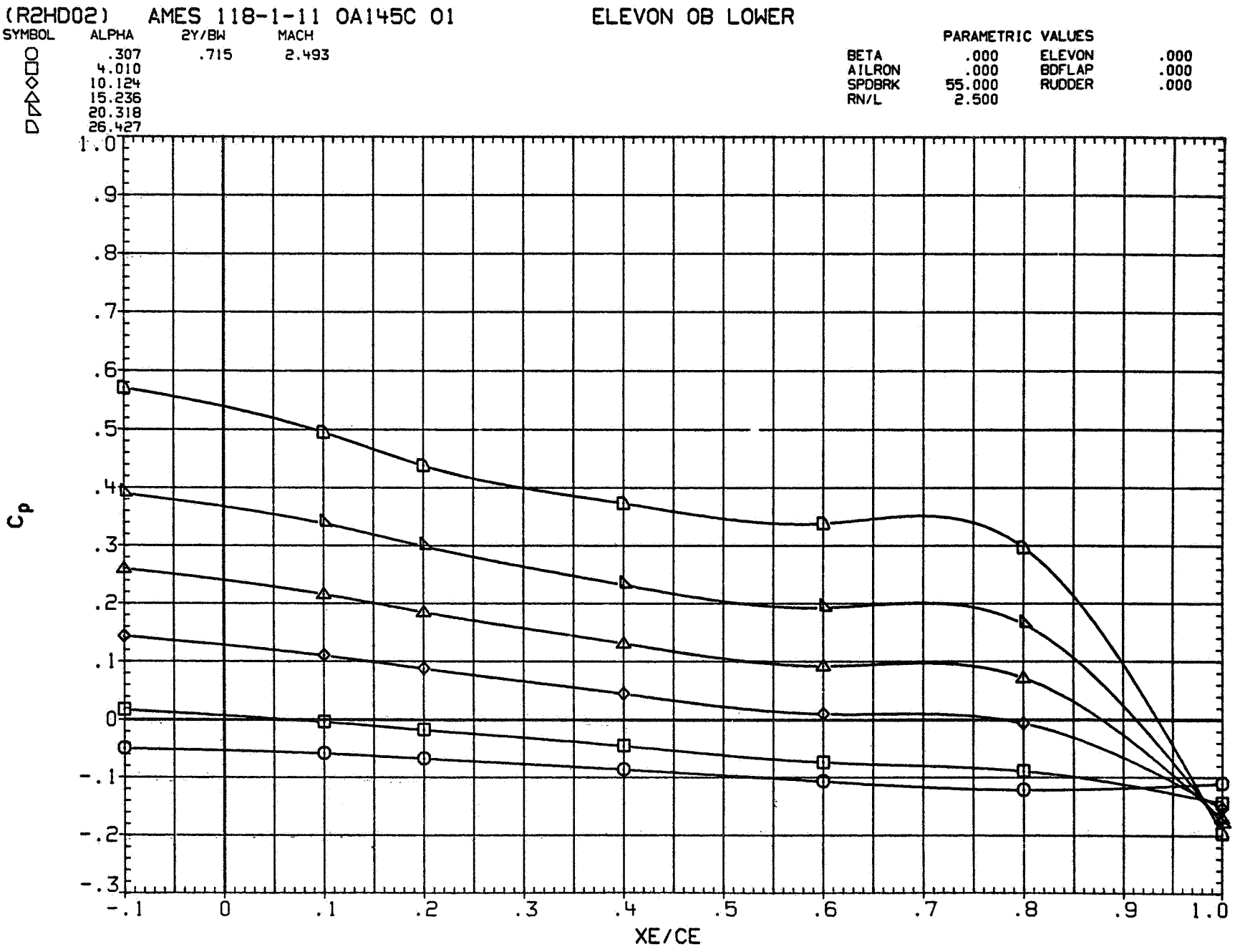


FIG.64 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

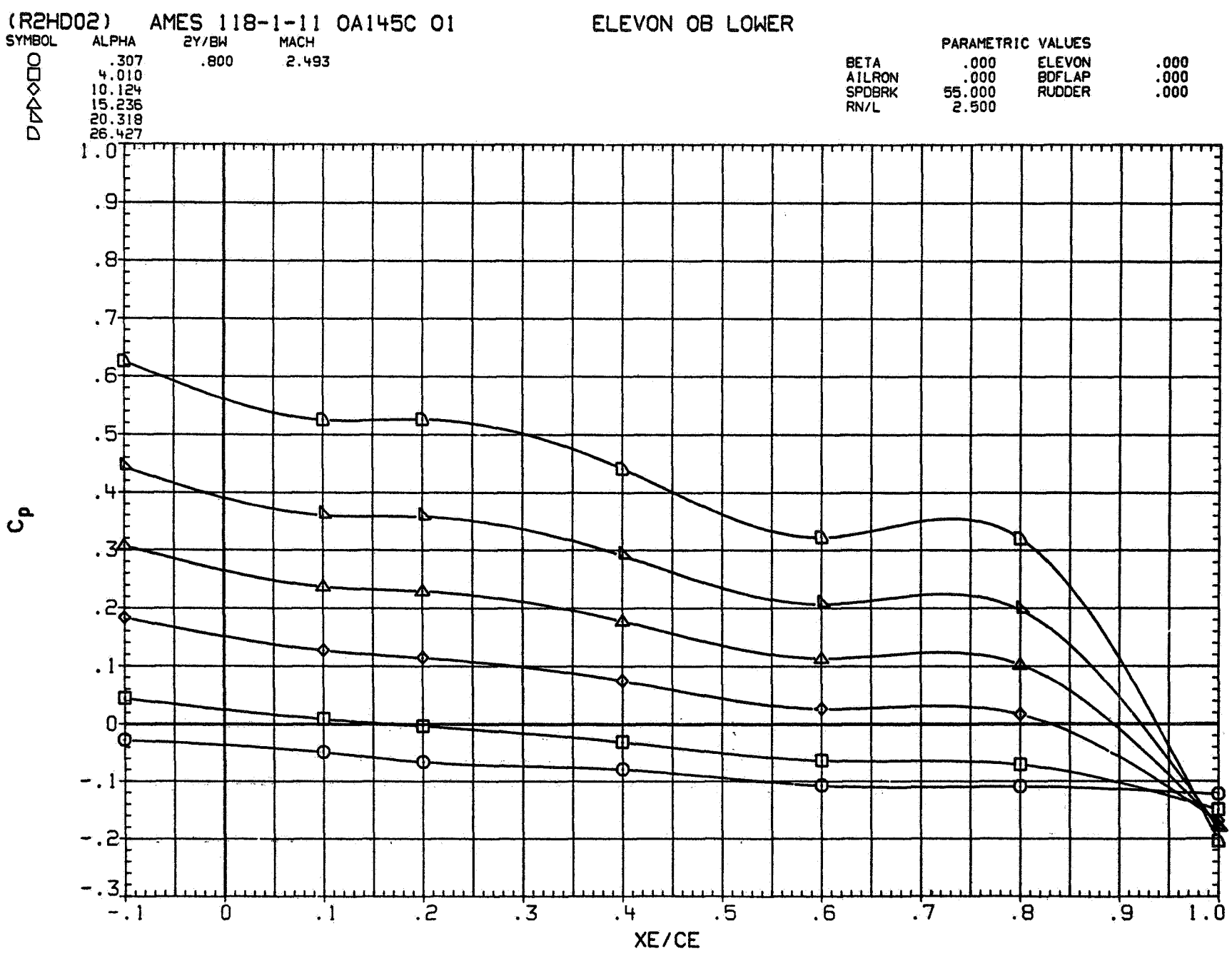


FIG.64 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HD02) AMES 118-1-11 OA145C 01 ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.307	.887	2.493
□	4.010		
◇	10.124		
△	15.236		
◁	20.318		
▷	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

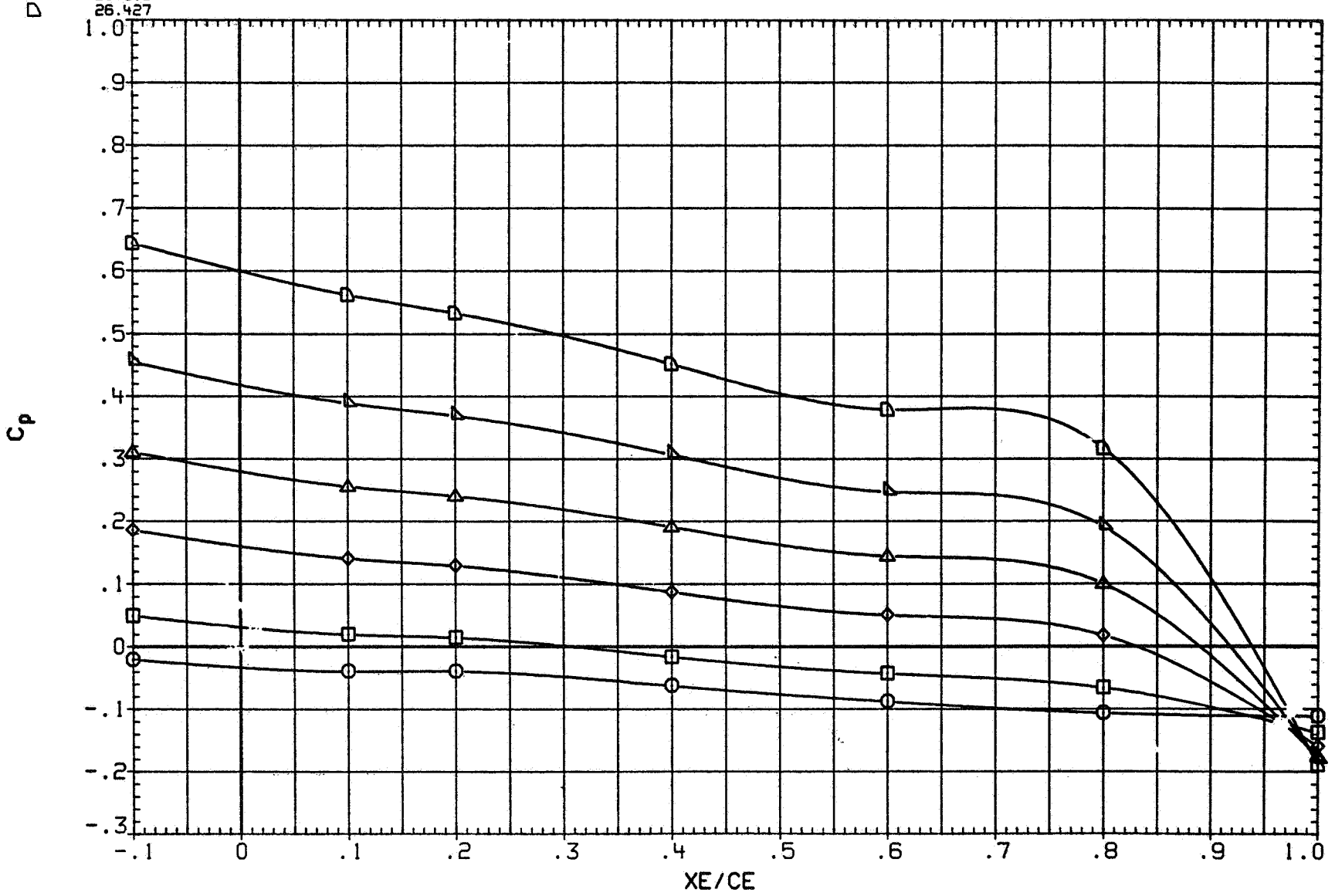


FIG.64 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

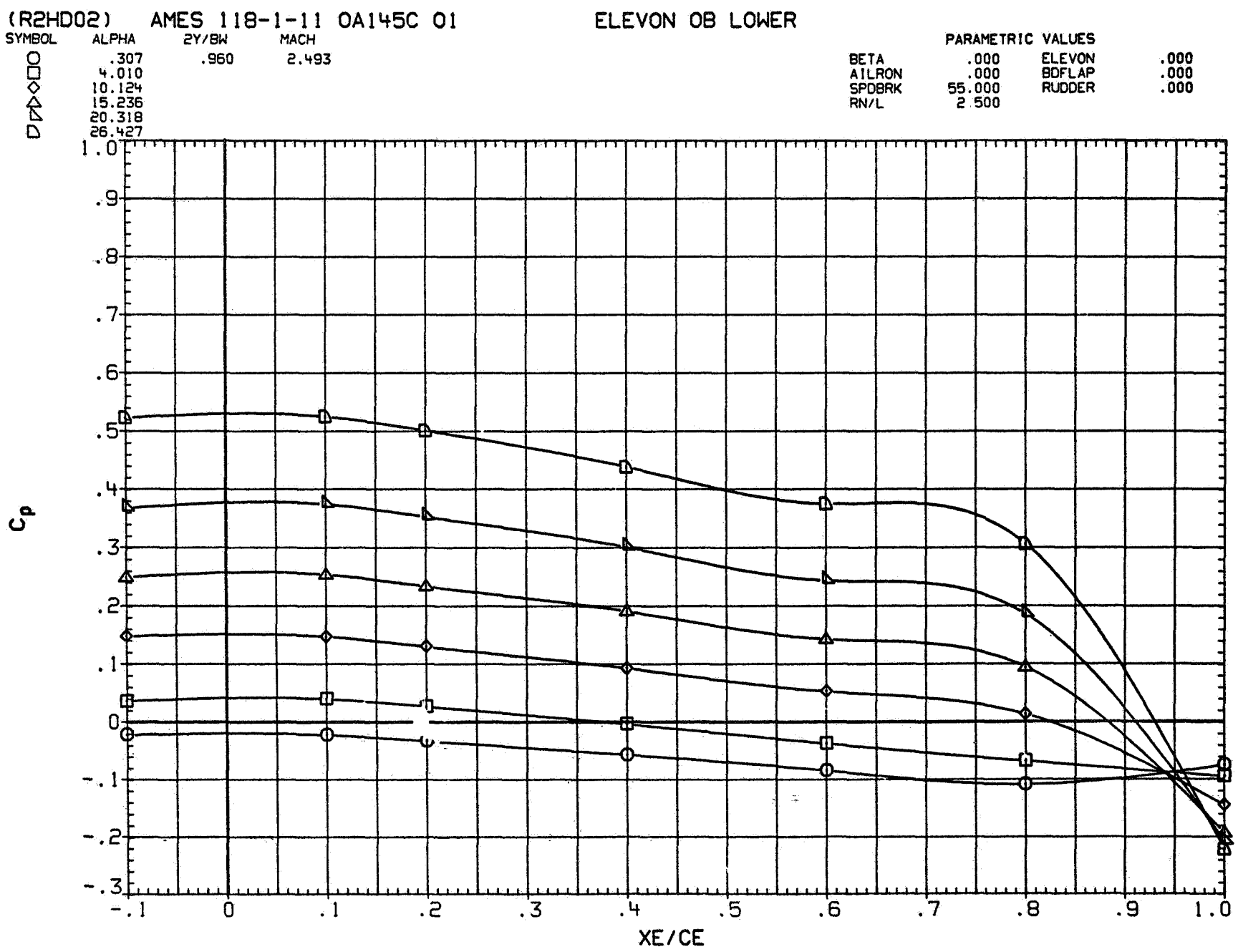


FIG.64 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

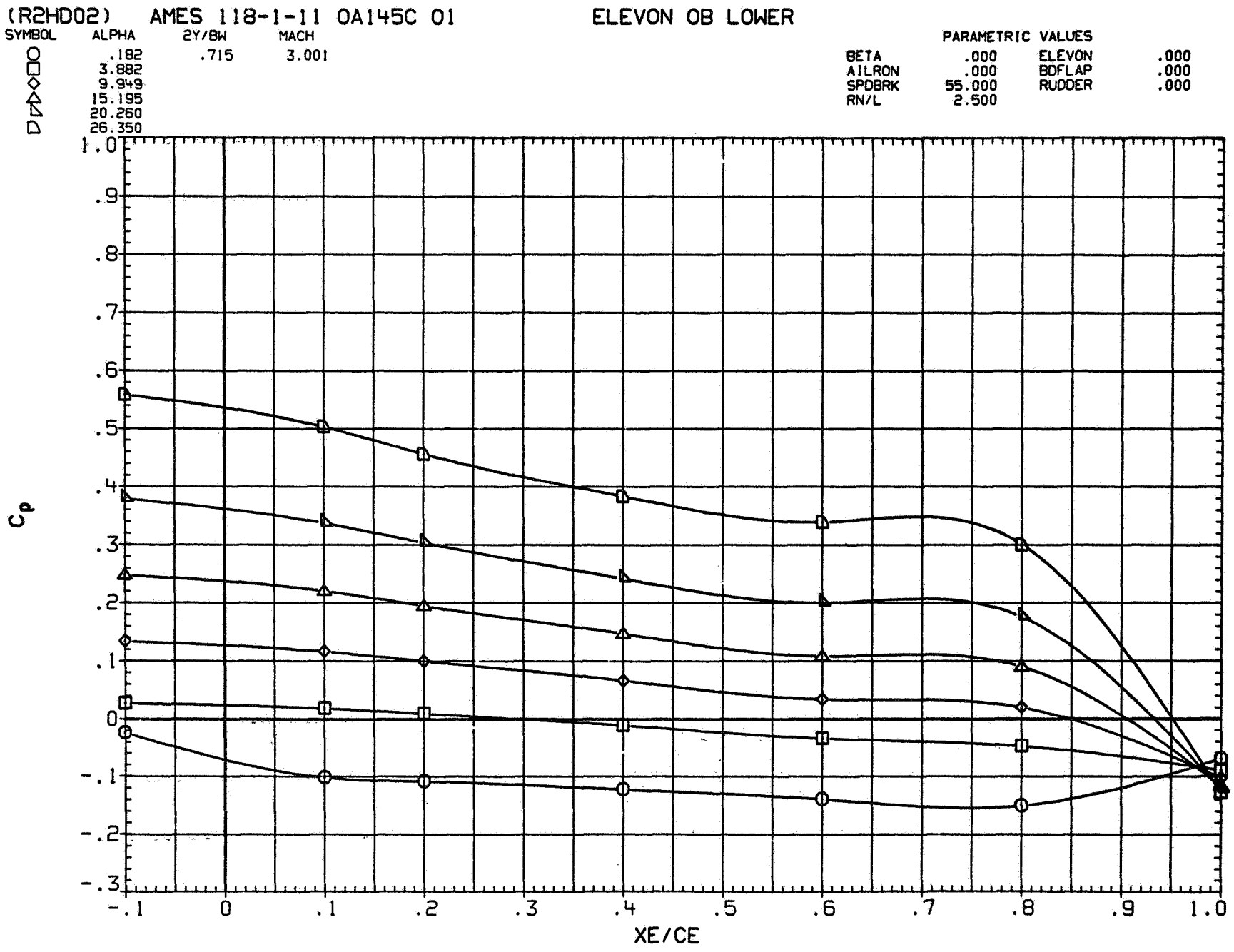


FIG.64 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

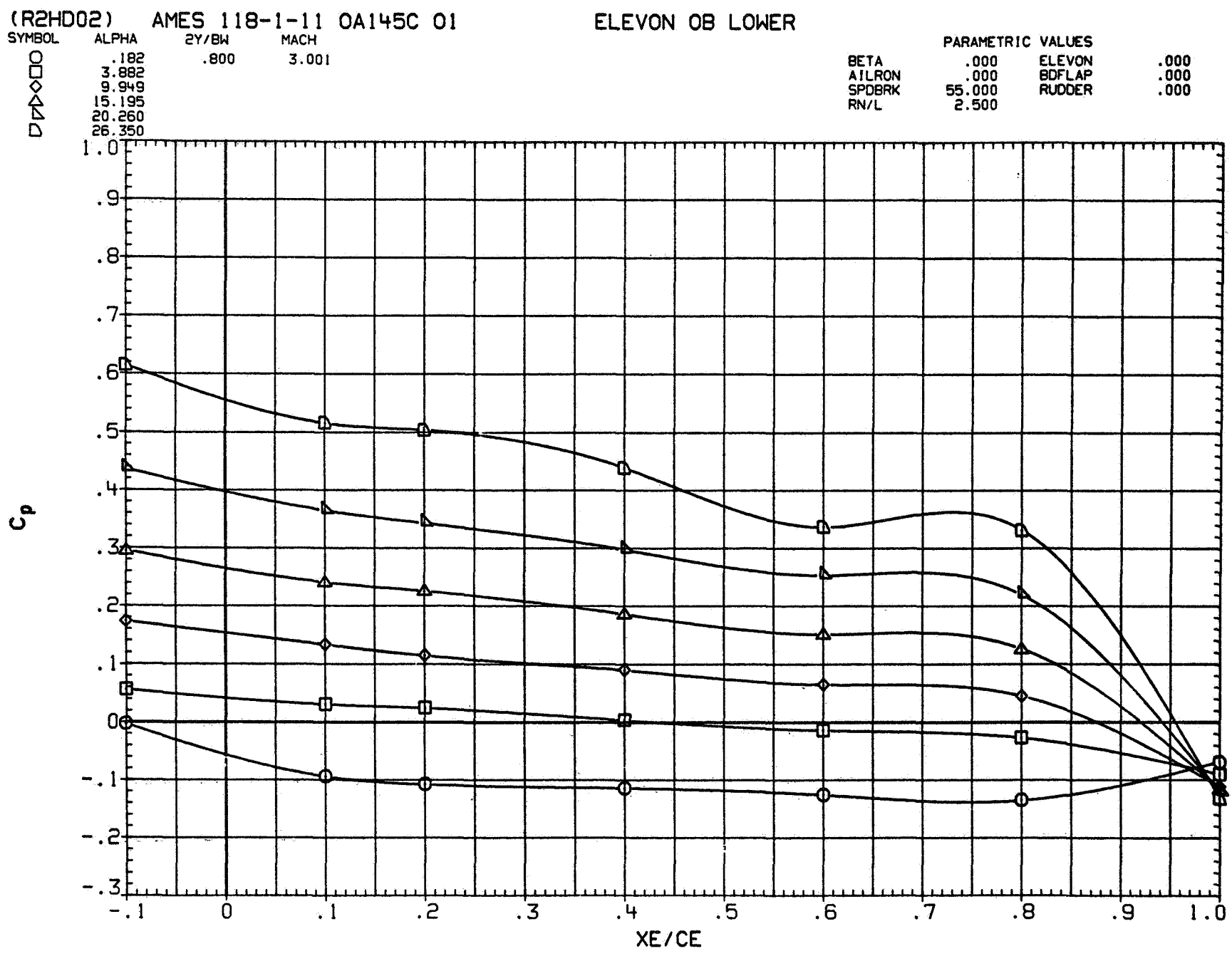


FIG.64 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HD02) AMES 118-1-11 OA145C 01

ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.887	3.001
□	3.882		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

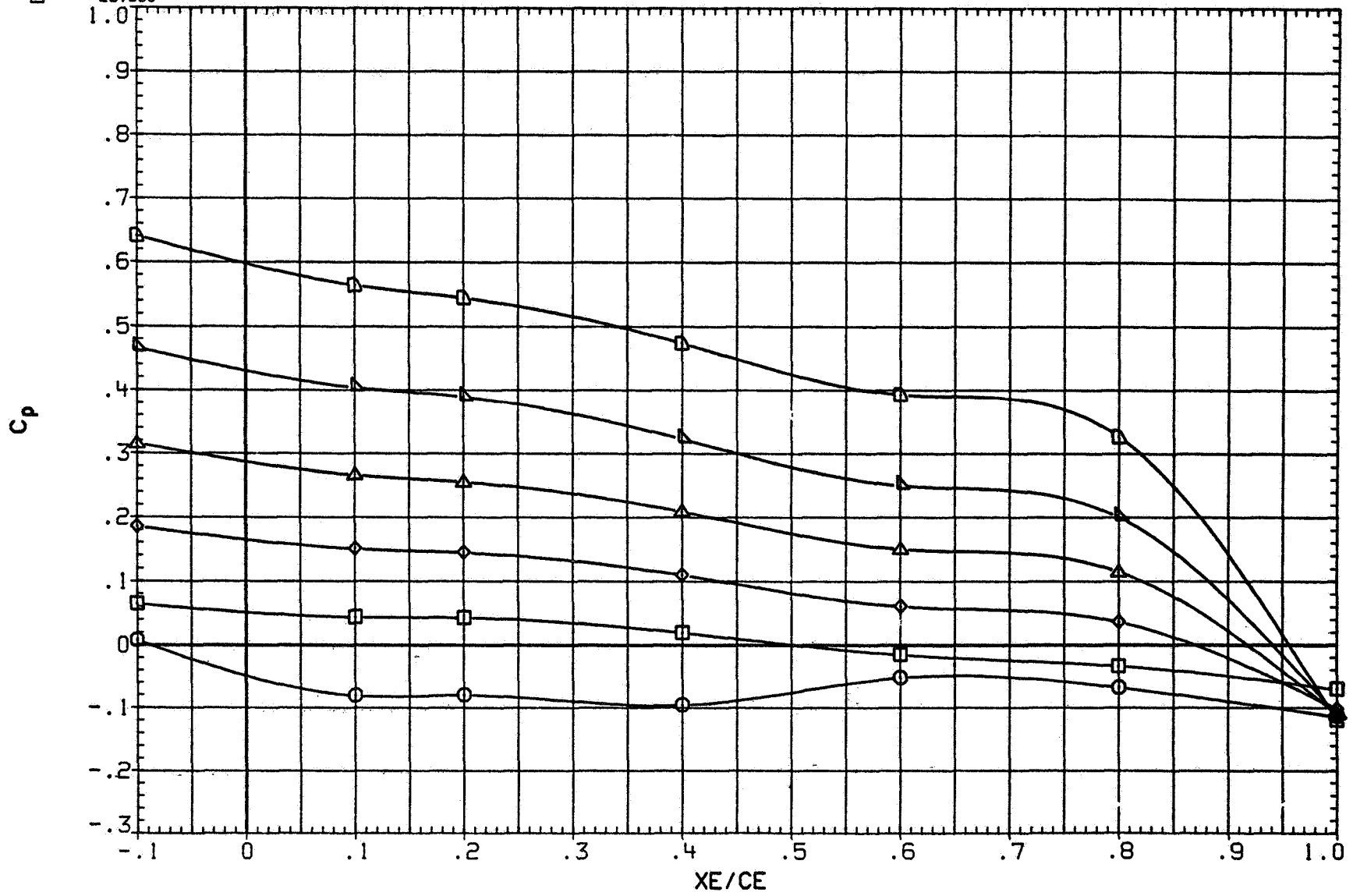


FIG.64 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

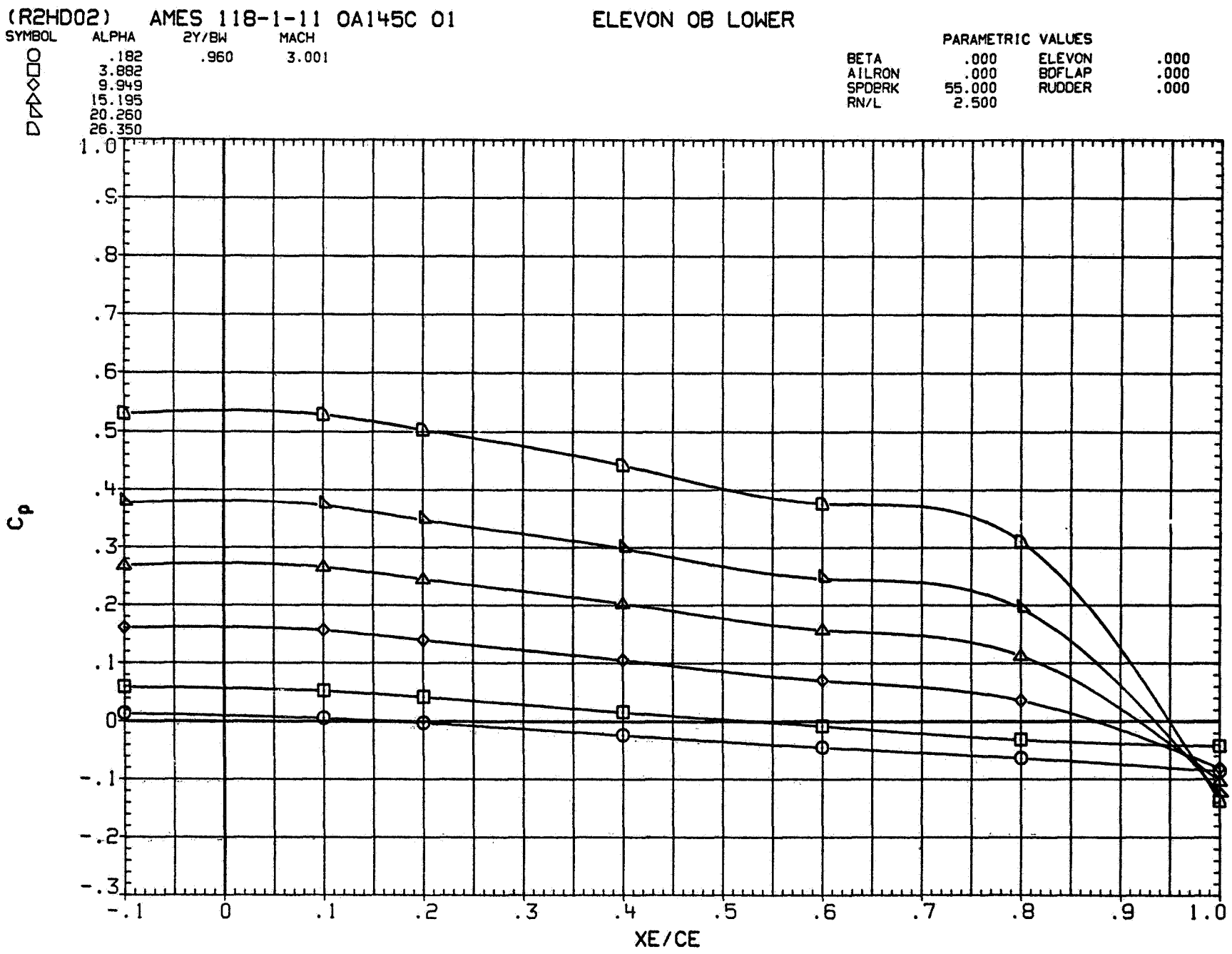


FIG.64 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HD02) AMES 118-1-11 0A145C 01 ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.020	.715	3.498
□	4.642		
◇	9.674		
△	14.765		
◁	19.824		
□	25.034		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

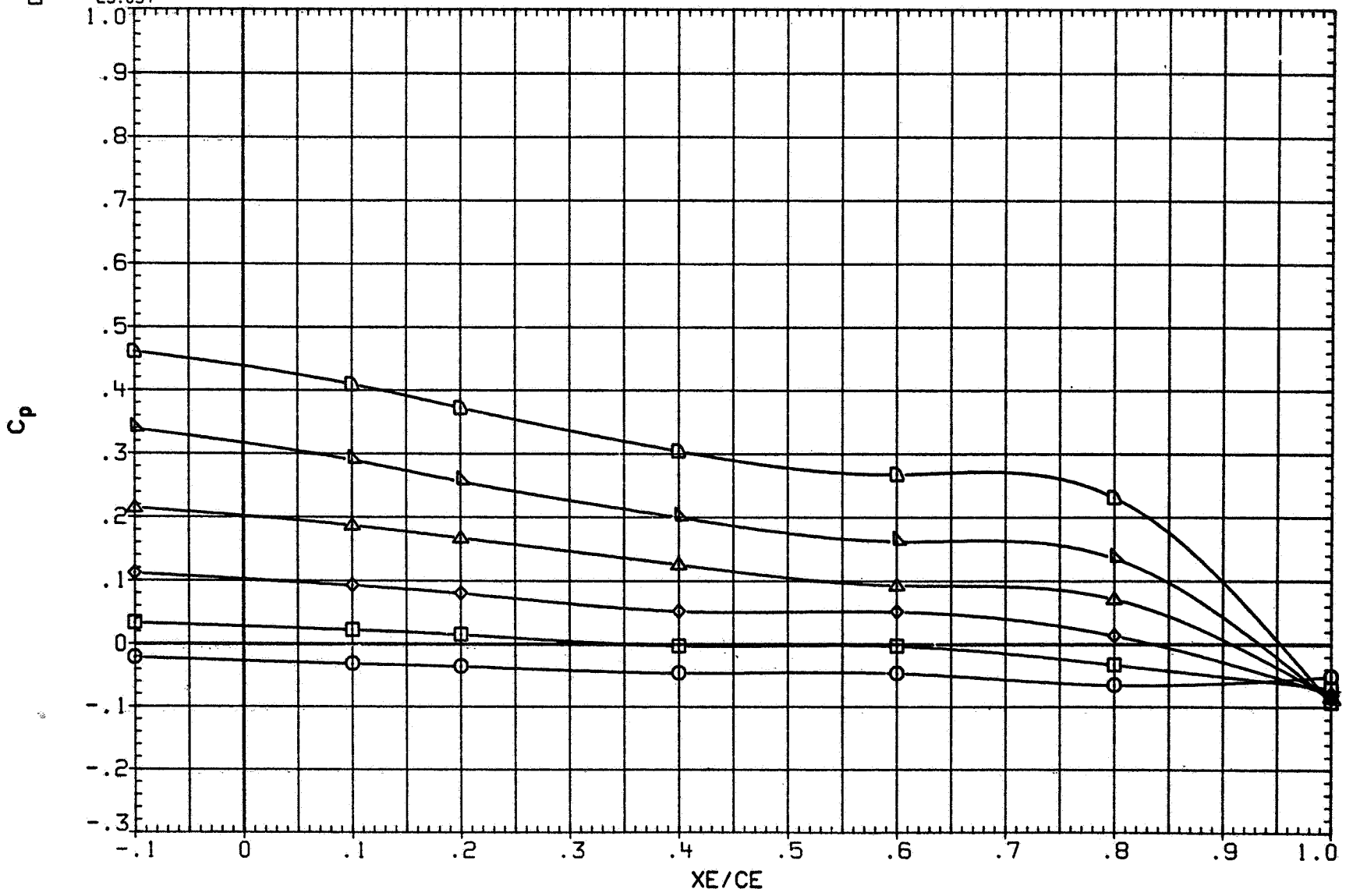


FIG.64 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

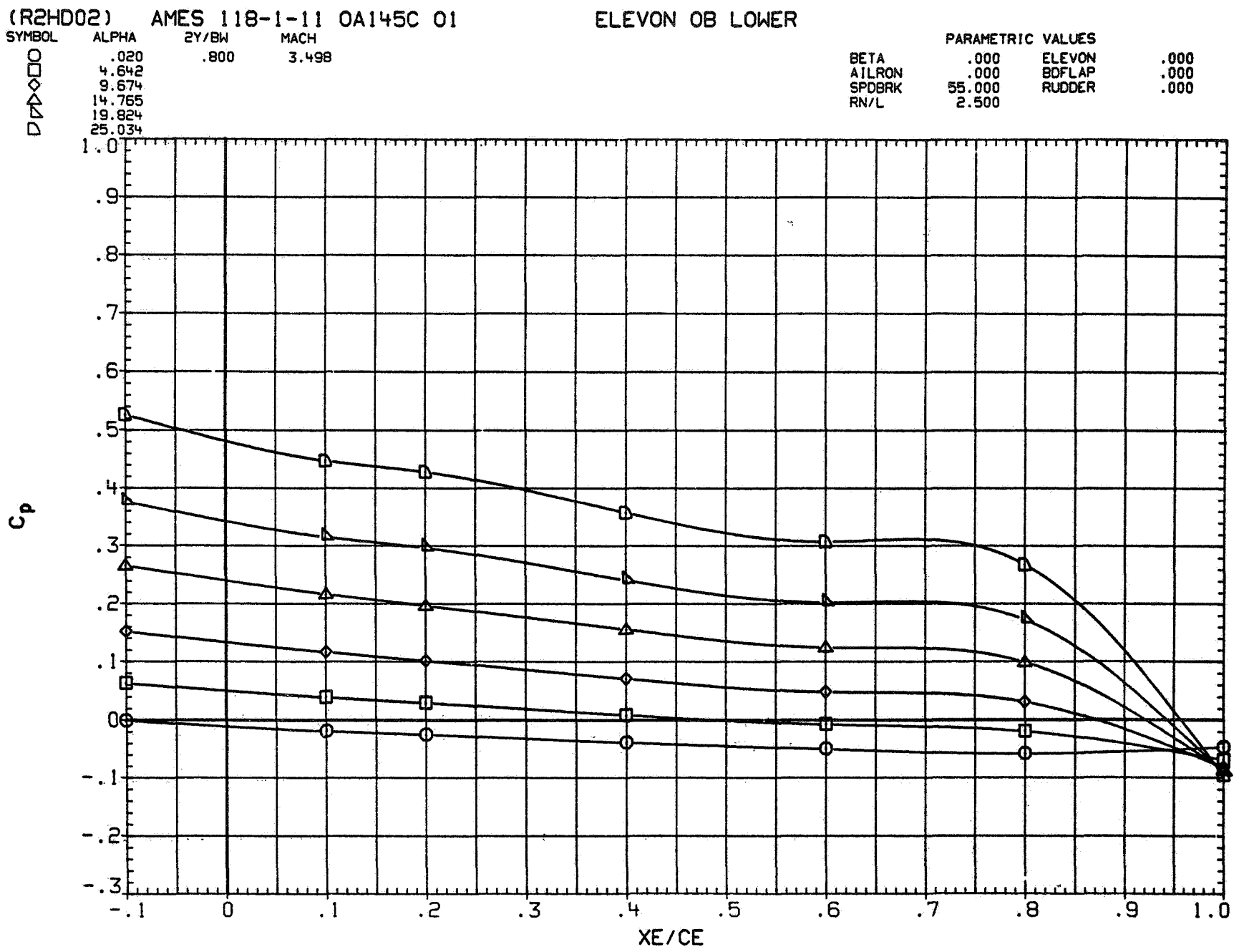


FIG.64 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

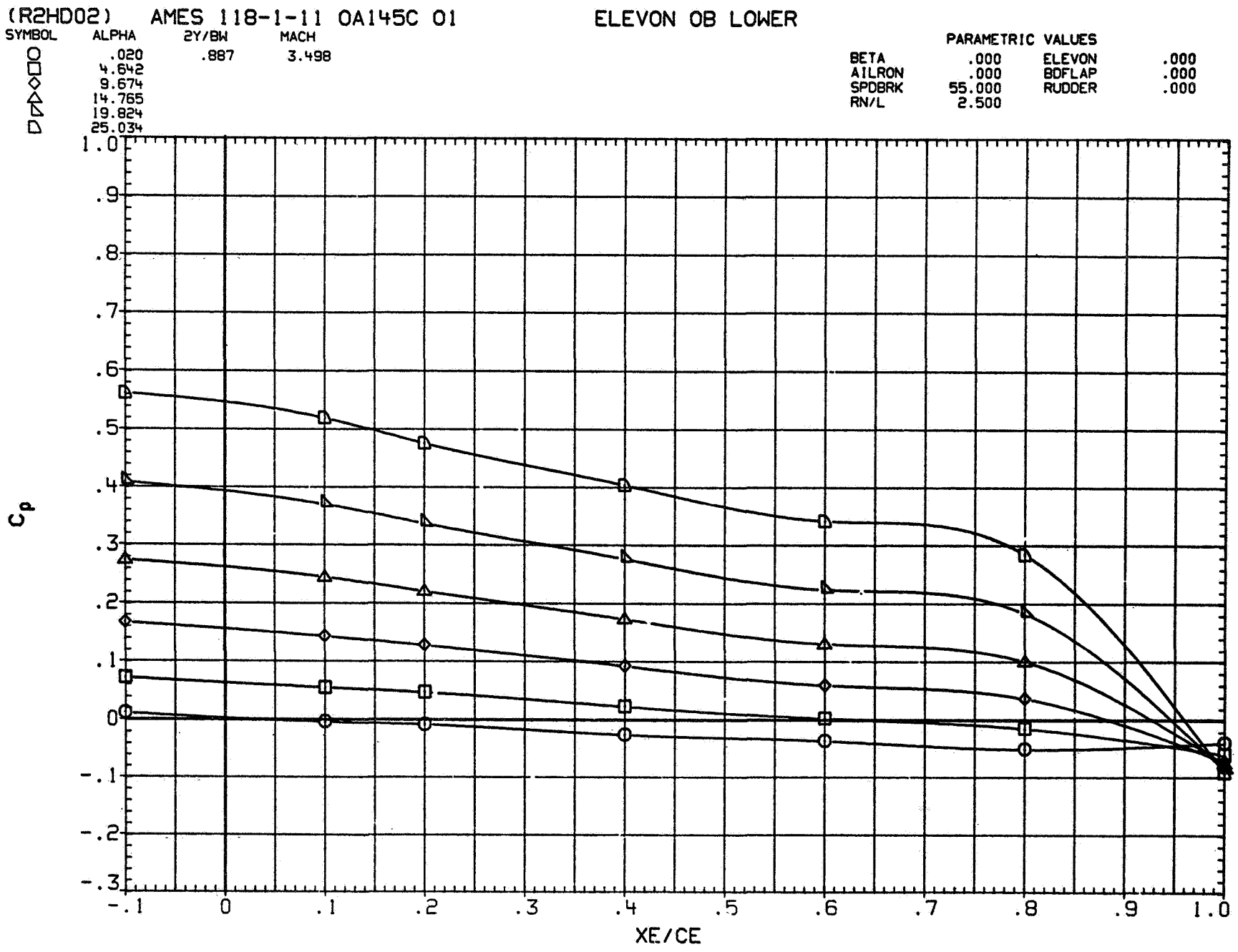


FIG.64 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

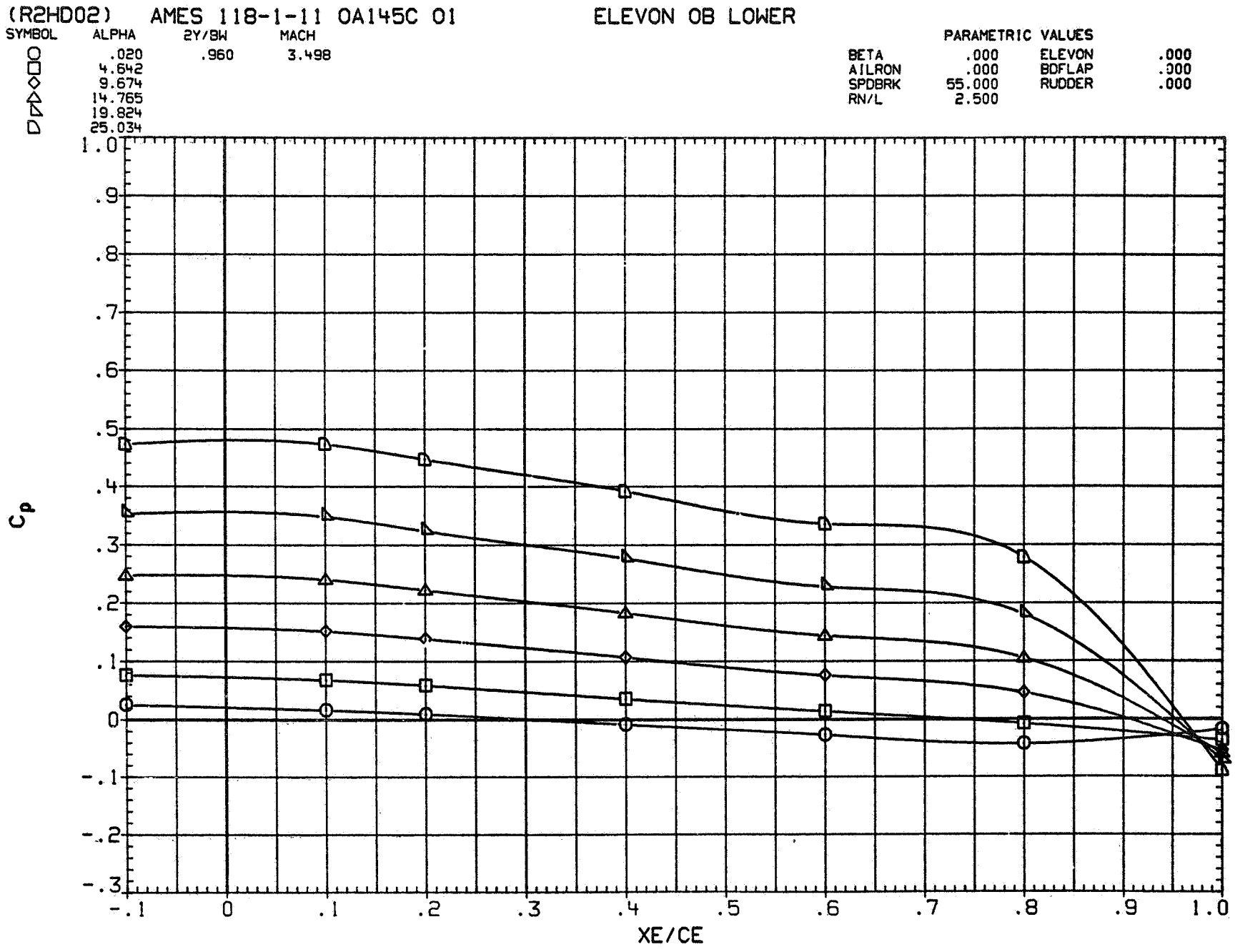


FIG.64 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

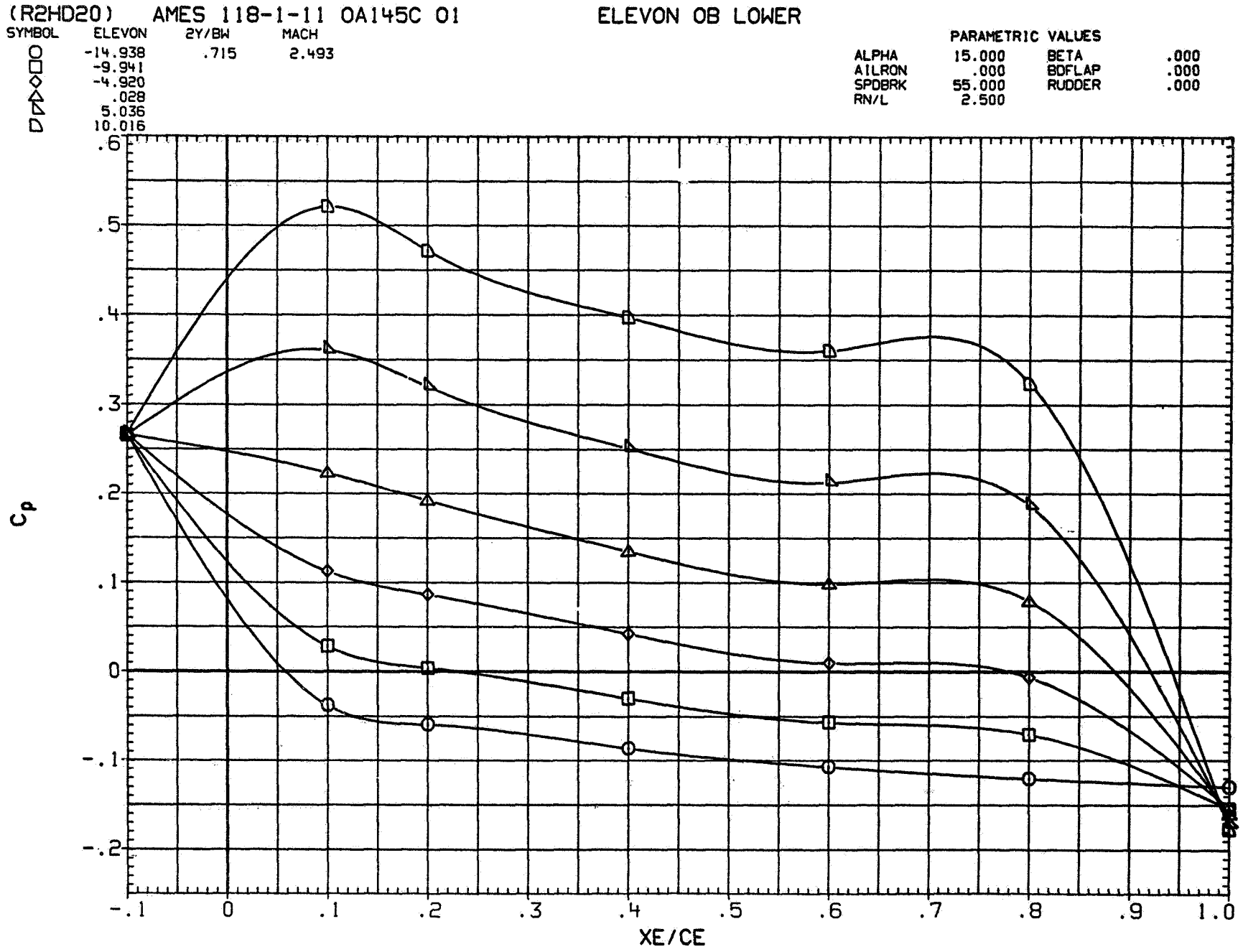


FIG.65 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HD20) AMES 118-1-11 OA145C 01 ELEVON OB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.938	.800	2.493
□	-9.941		
◇	-4.920		
△	.028		
◁	5.036		
▷	10.016		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

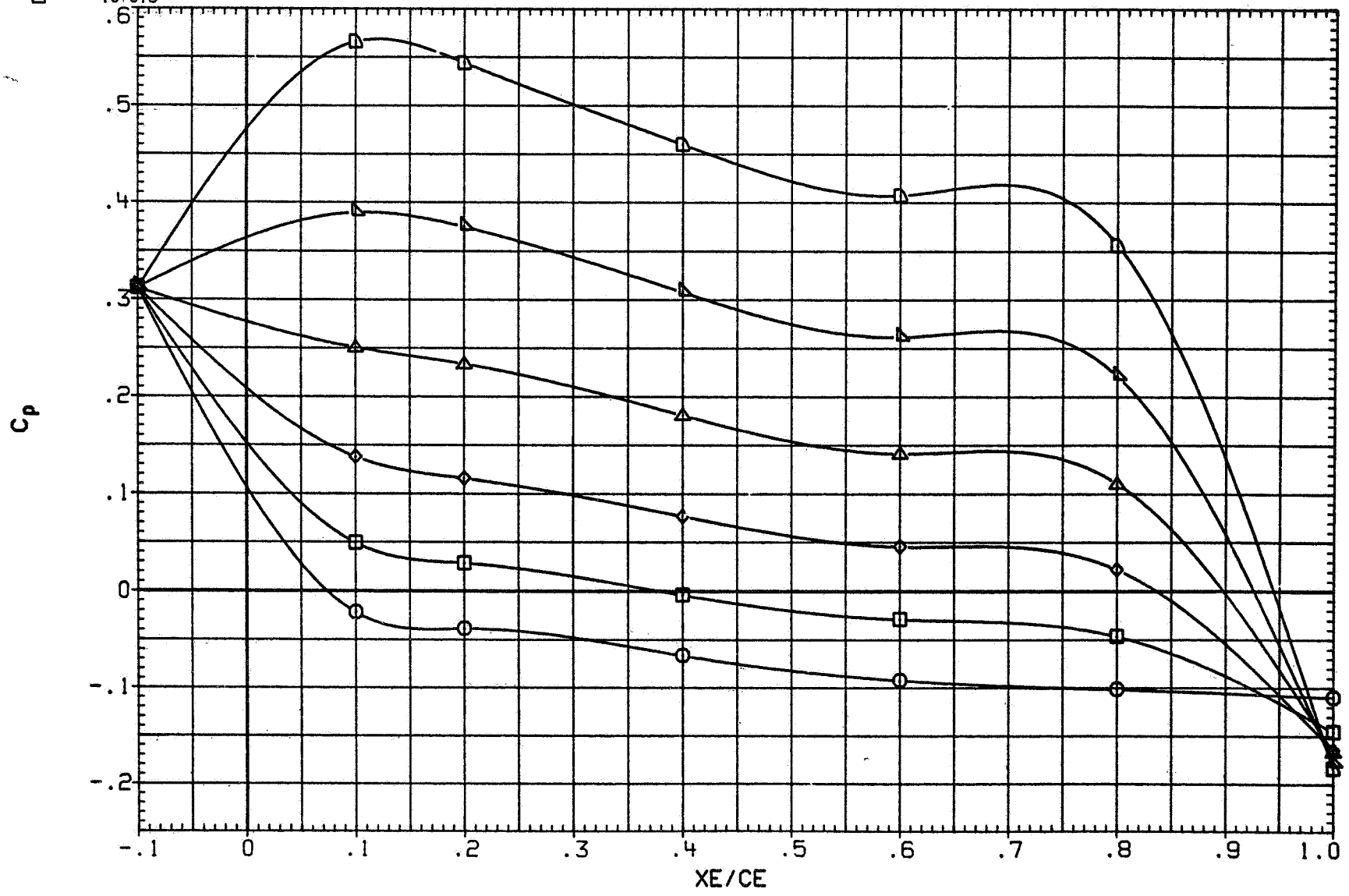


FIG.65 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

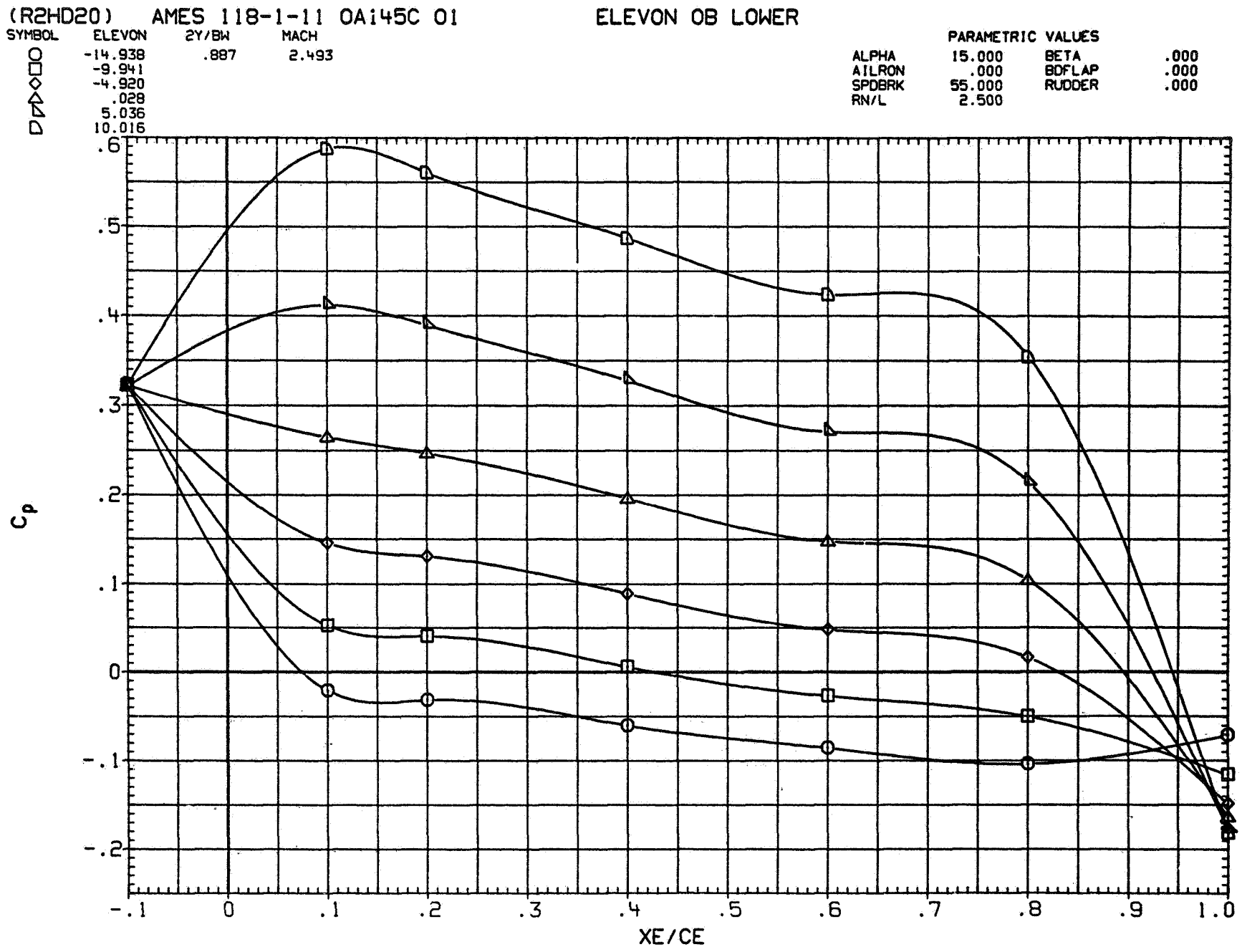


FIG.65 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

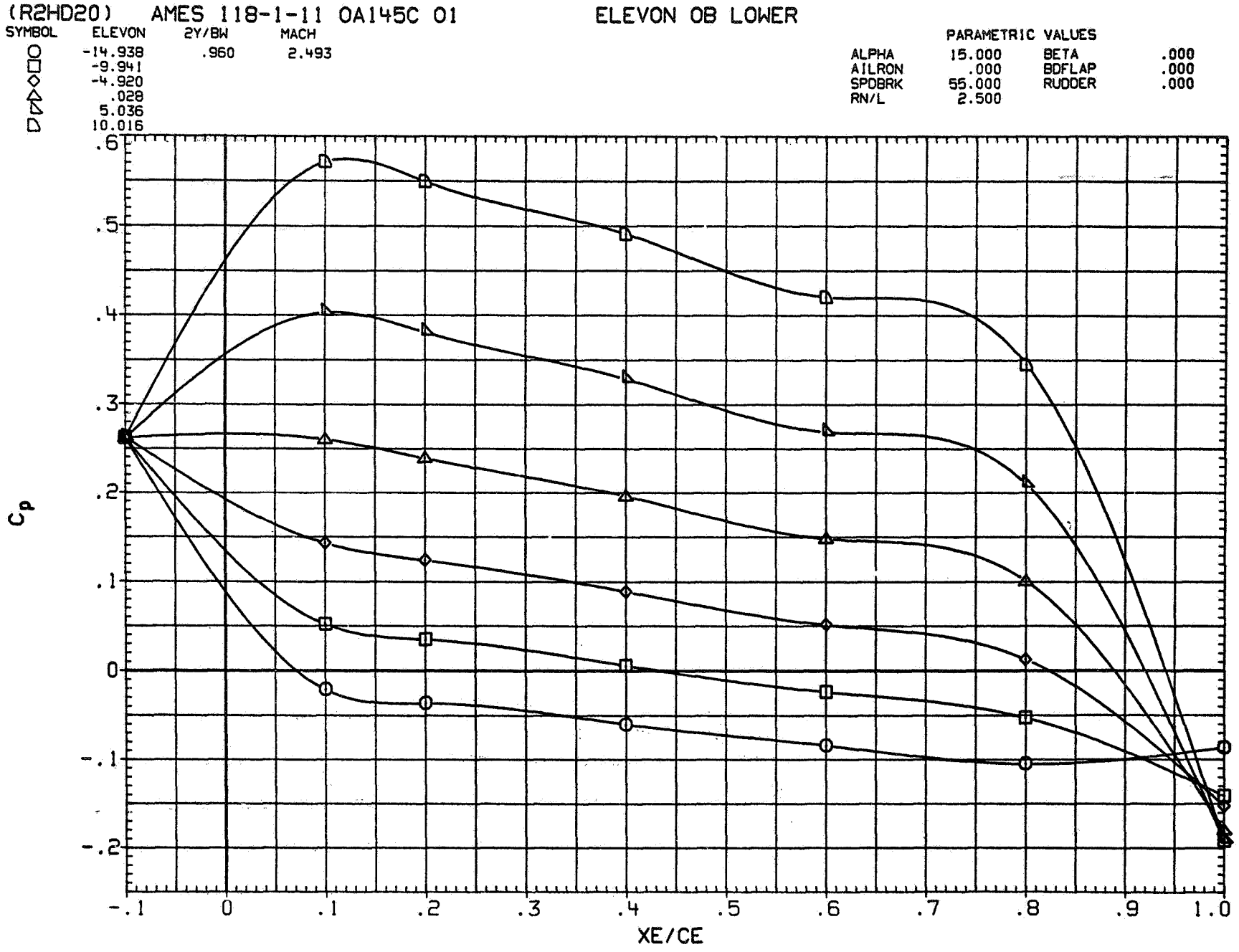


FIG.65 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HD20) AMES 118-1-11 0A145C 01 ELEVON OB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.966	.715	3.000
□	-9.946		
◇	-4.933		
△	.041		
◁	5.002		
D	10.026		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

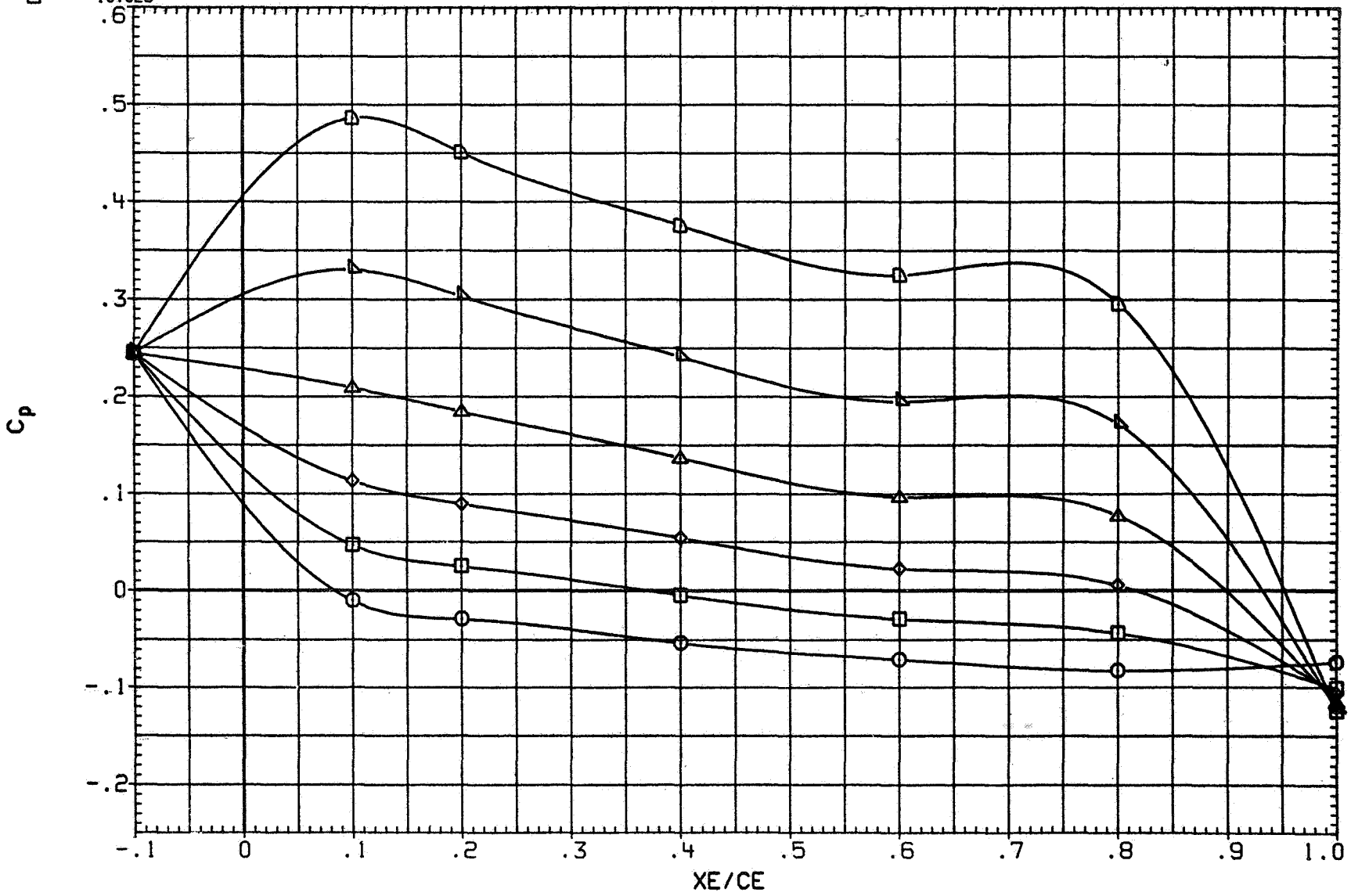


FIG.65 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HD20) AMES 118-1-11 0A145C 01

ELEVON OB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.966	.800	3.000
□	-9.946		
◇	-4.933		
△	.041		
◁	5.002		
D	10.026		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

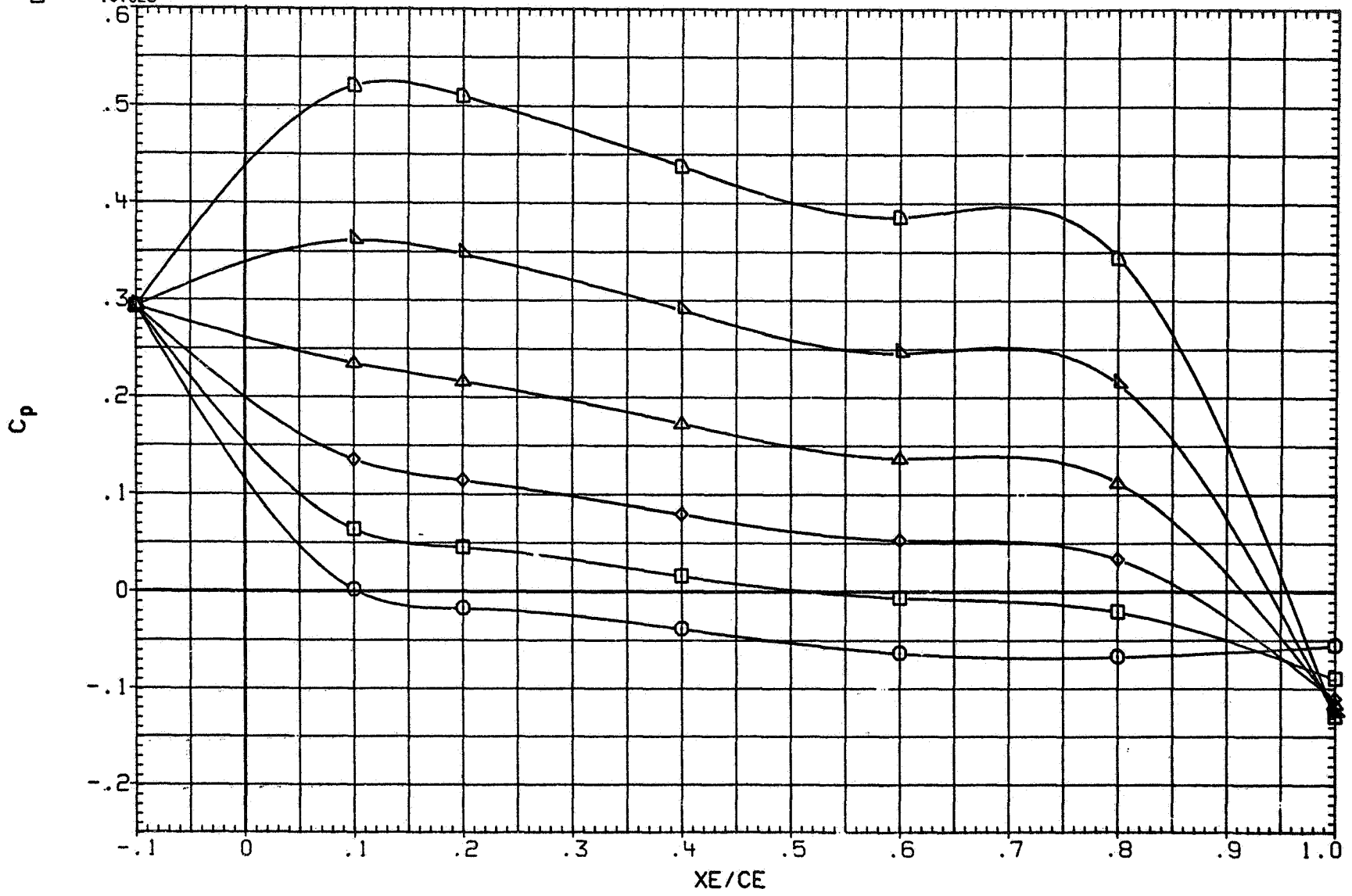


FIG.65 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HD20) AMES 118-1-11 0A145C 01 ELEVON OB LOWER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.966	.887	3.000
□	-9.946		
◇	-4.933		
◁	.041		
△	5.002		
▱	10.026		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

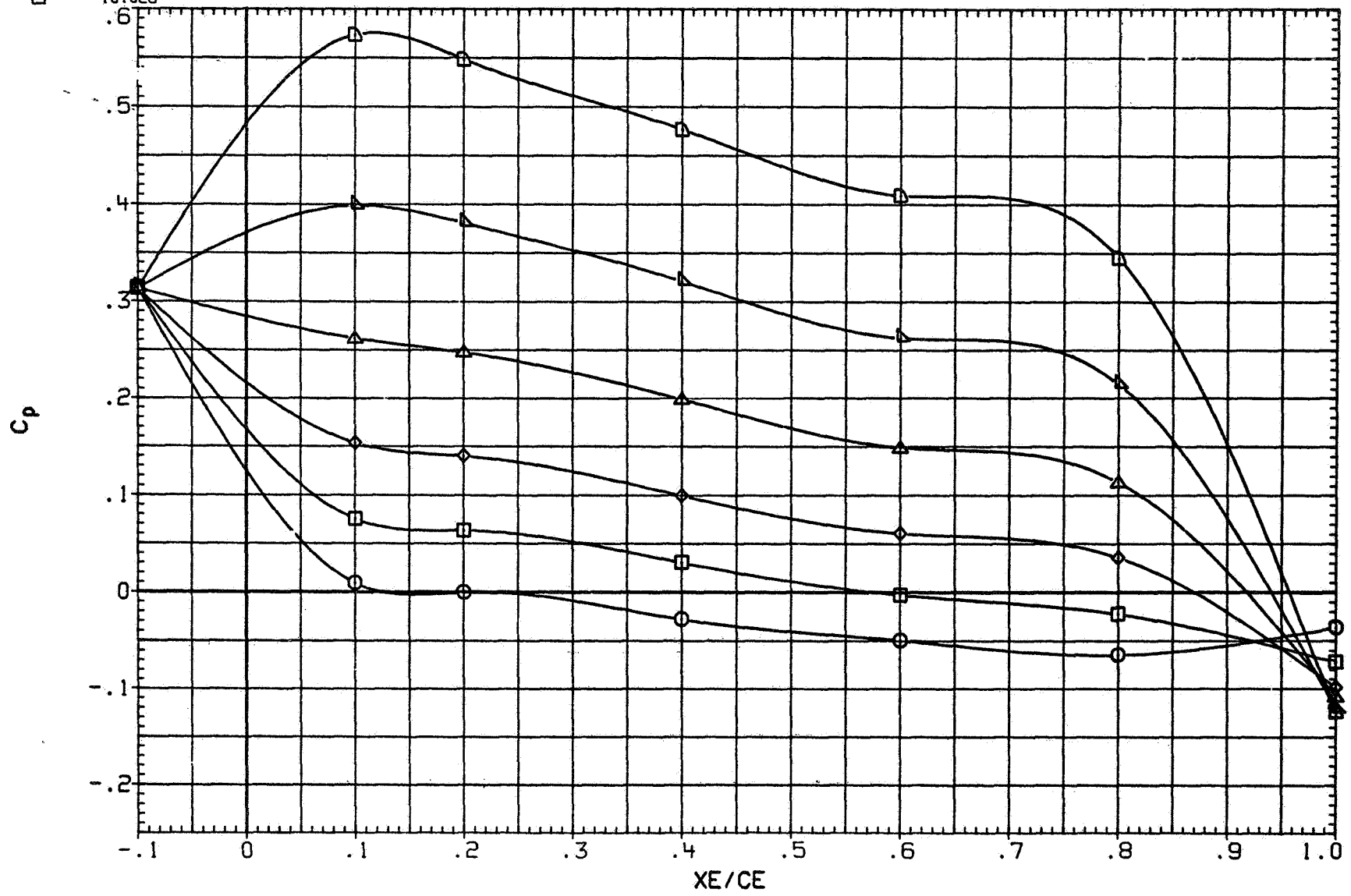


FIG.65 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

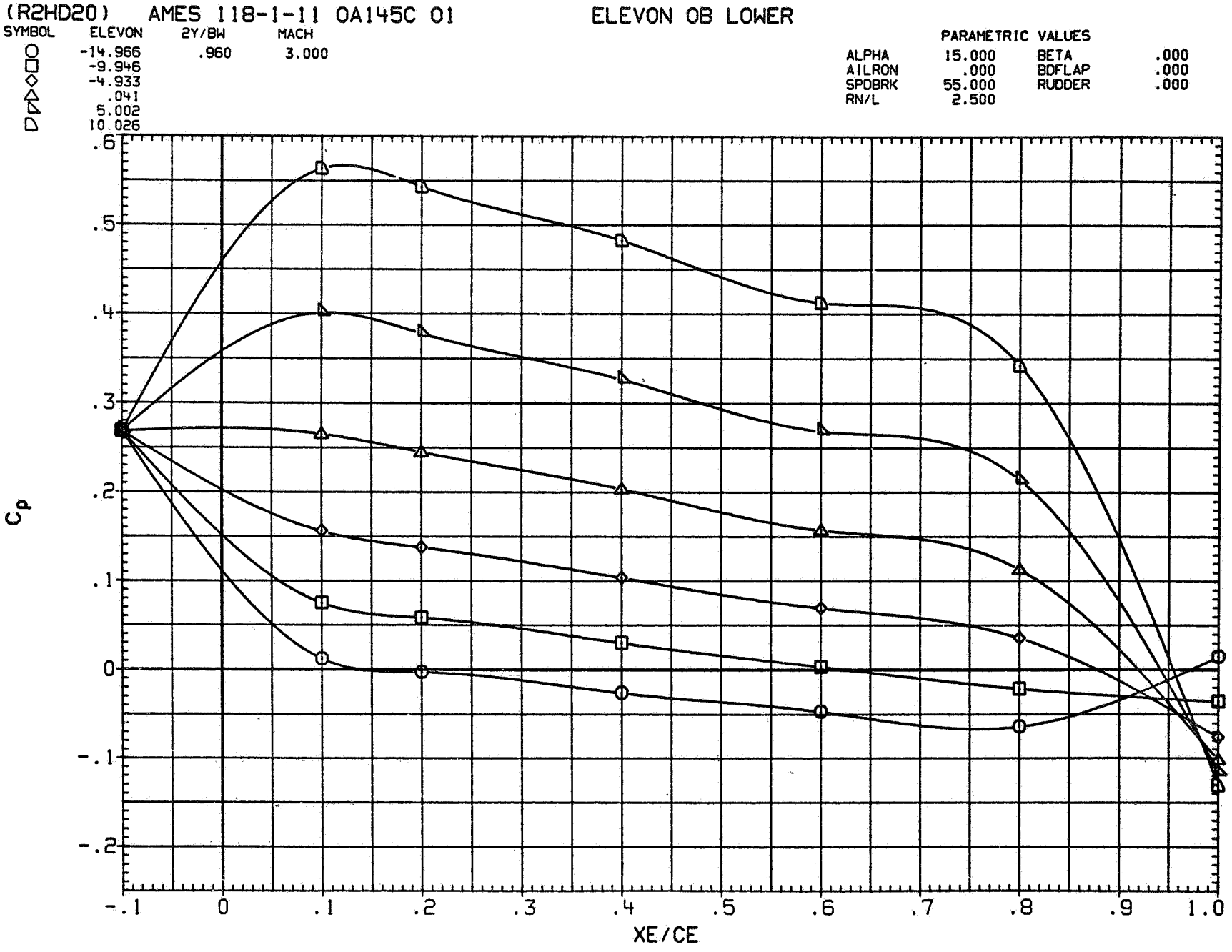


FIG.65 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

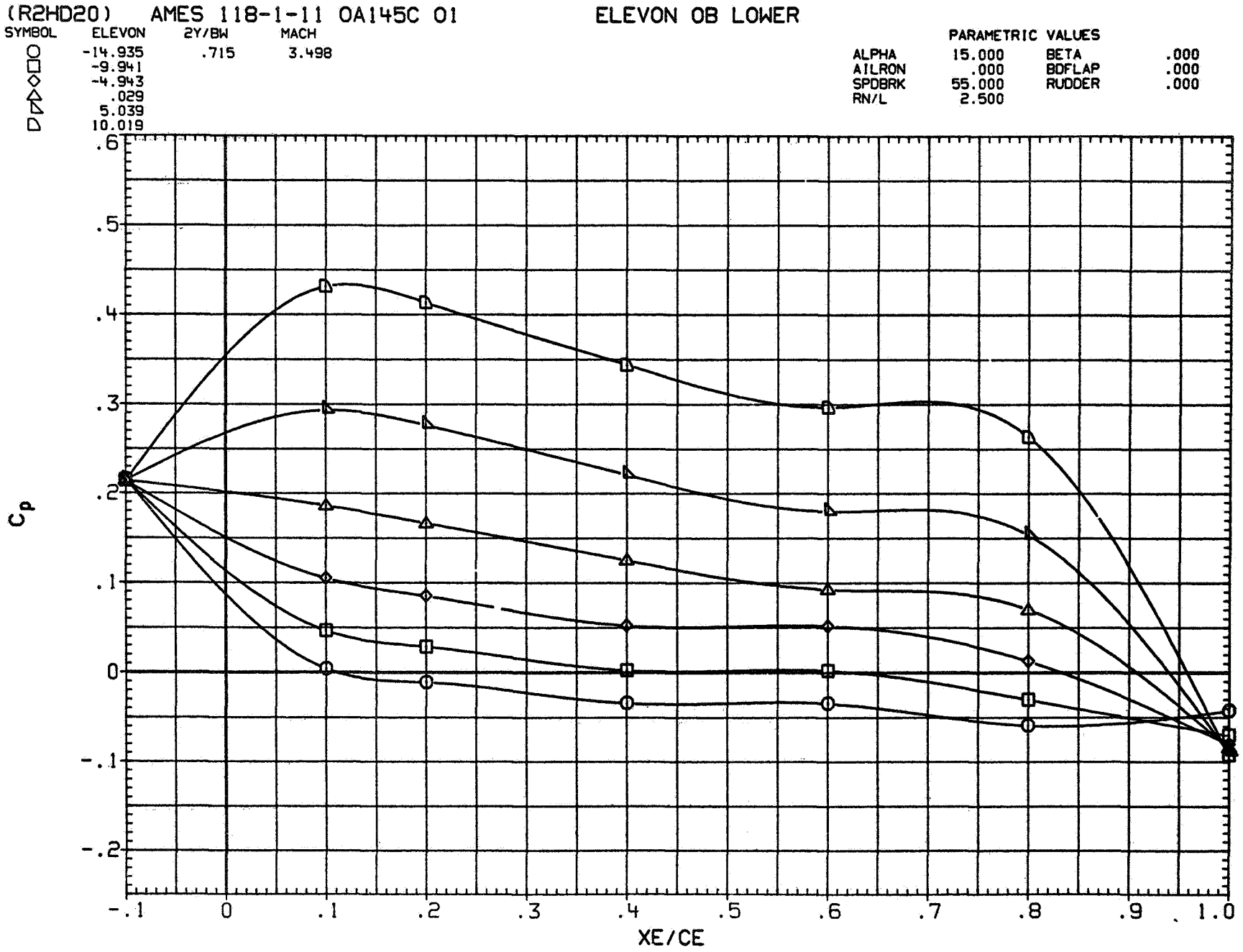


FIG.65 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

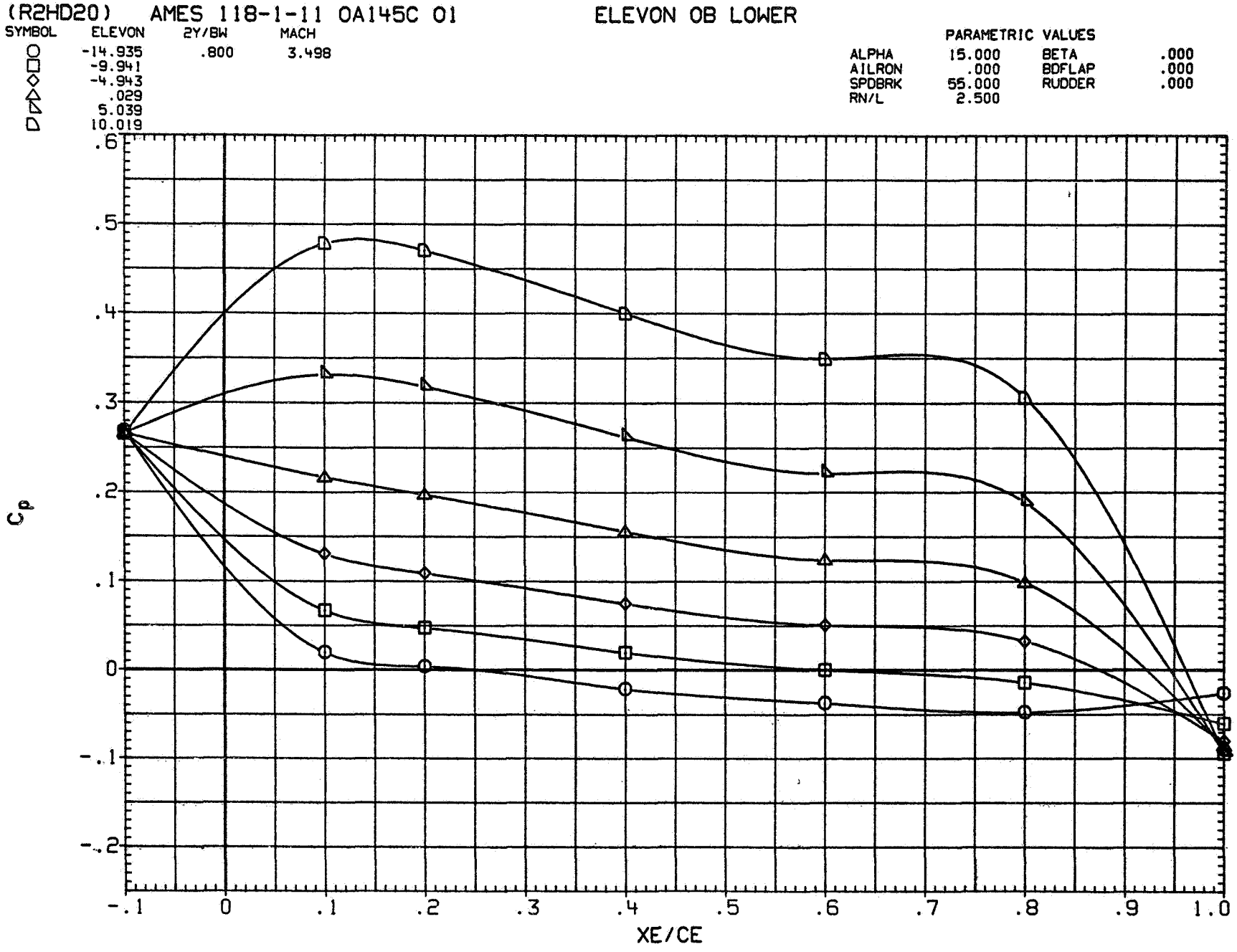


FIG.65 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

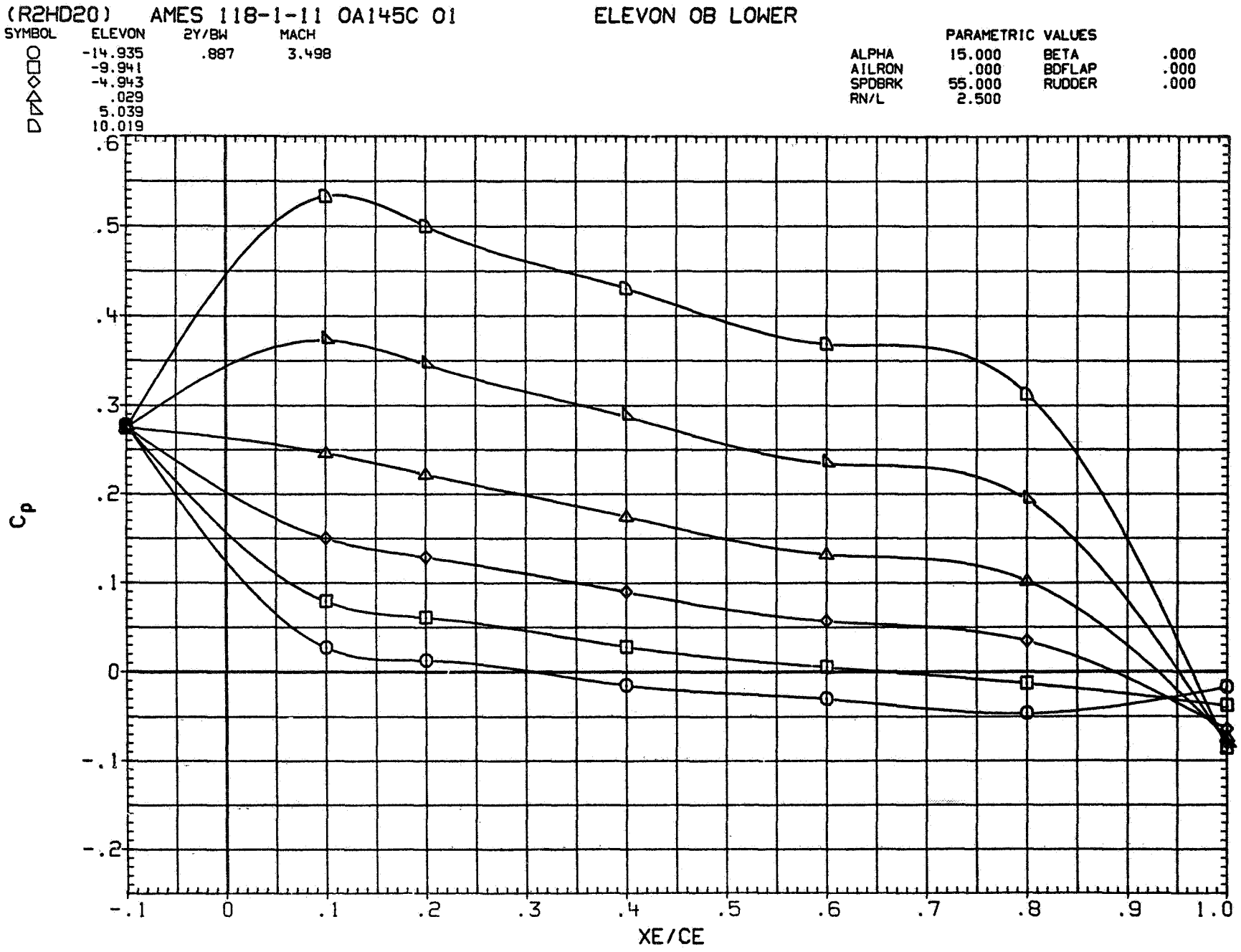


FIG.65 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

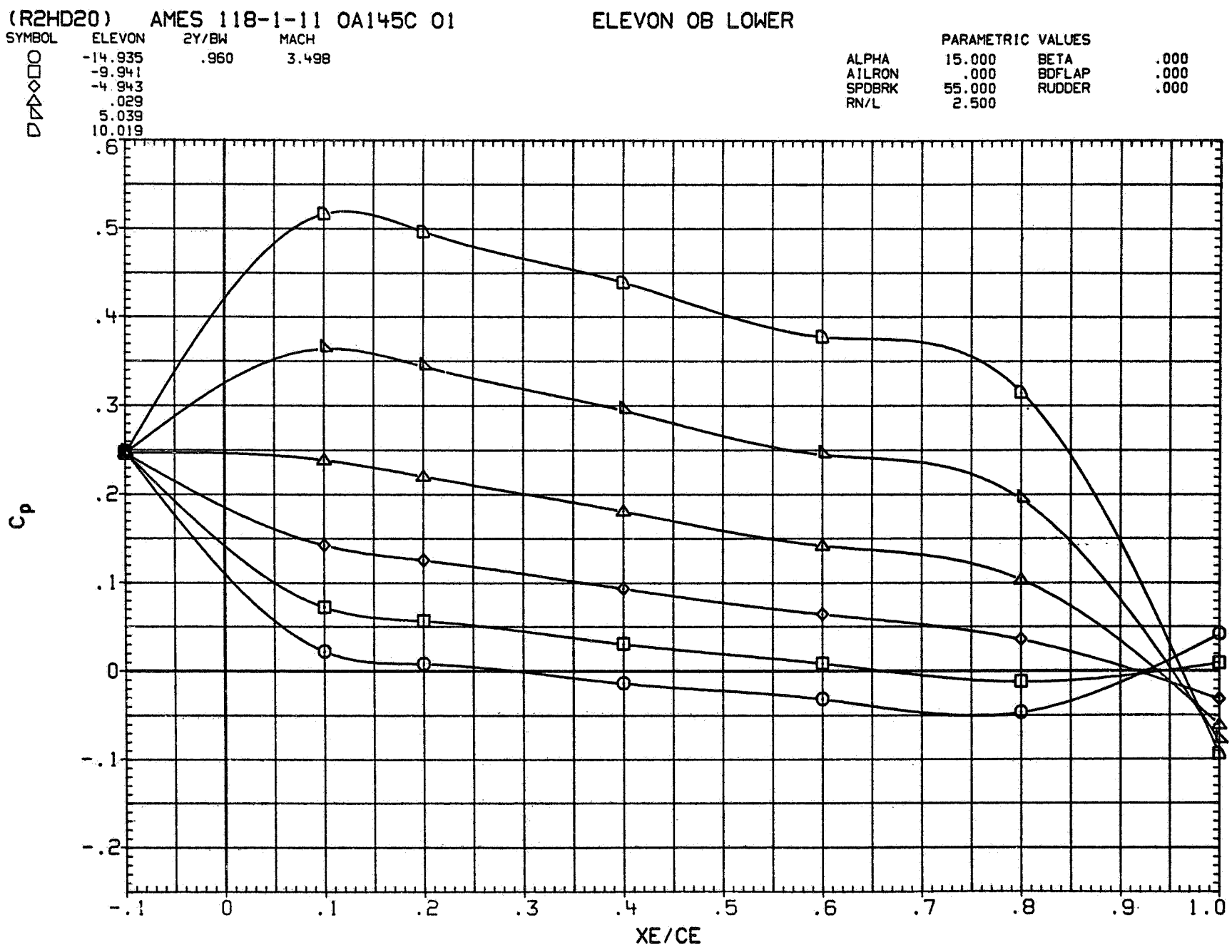


FIG.65 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HD13) AMES 118-1-11 OA145C 01 ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.715	3.000
□	4.933		
◇	10.065		
△	15.160		
◁	20.226		
D	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BOFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

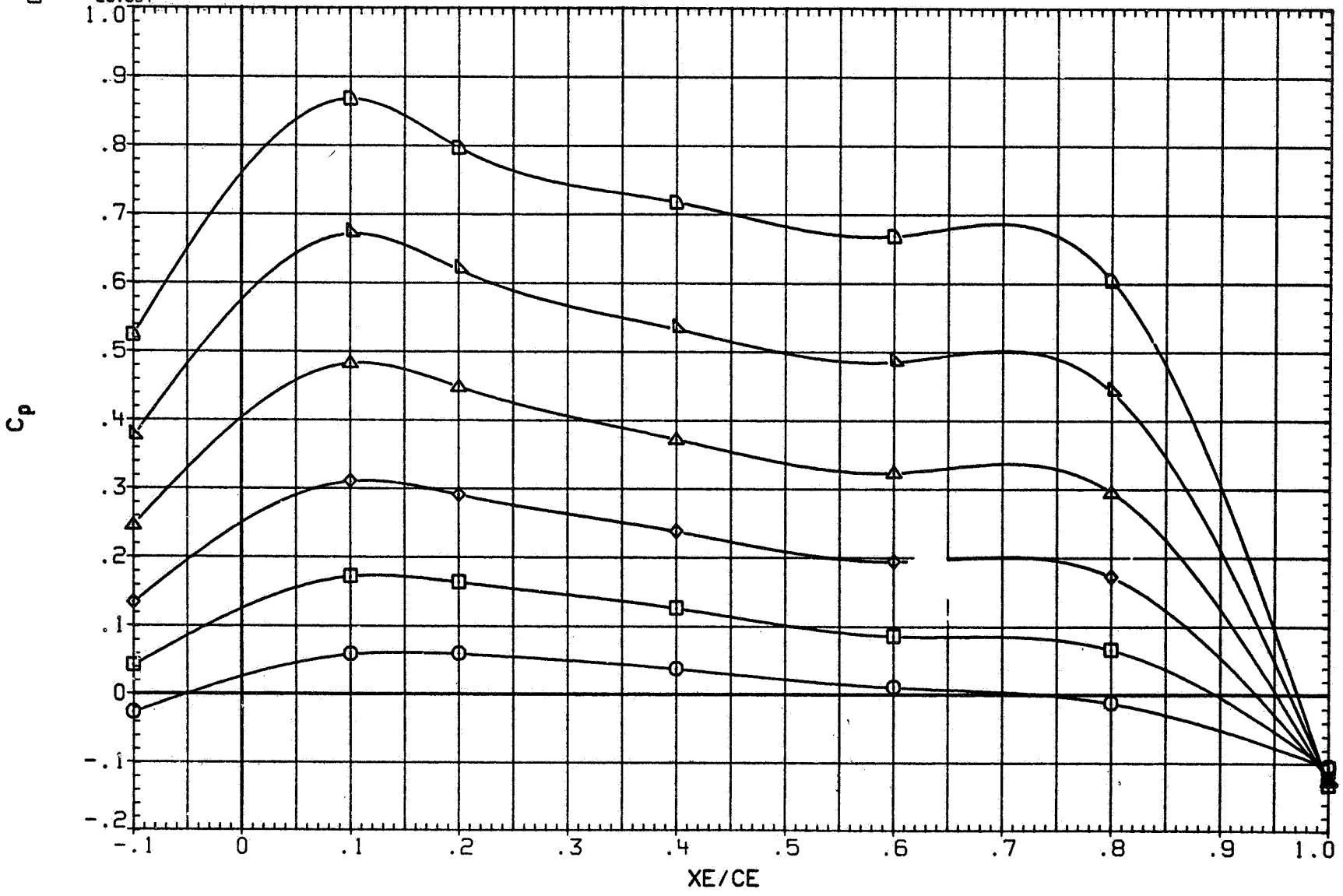


FIG.66 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HD13) AMES 118-1-11 OA145C 01 ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.800	3.000
□	4.933		
◇	10.065		
△	15.160		
◁	20.226		
D	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

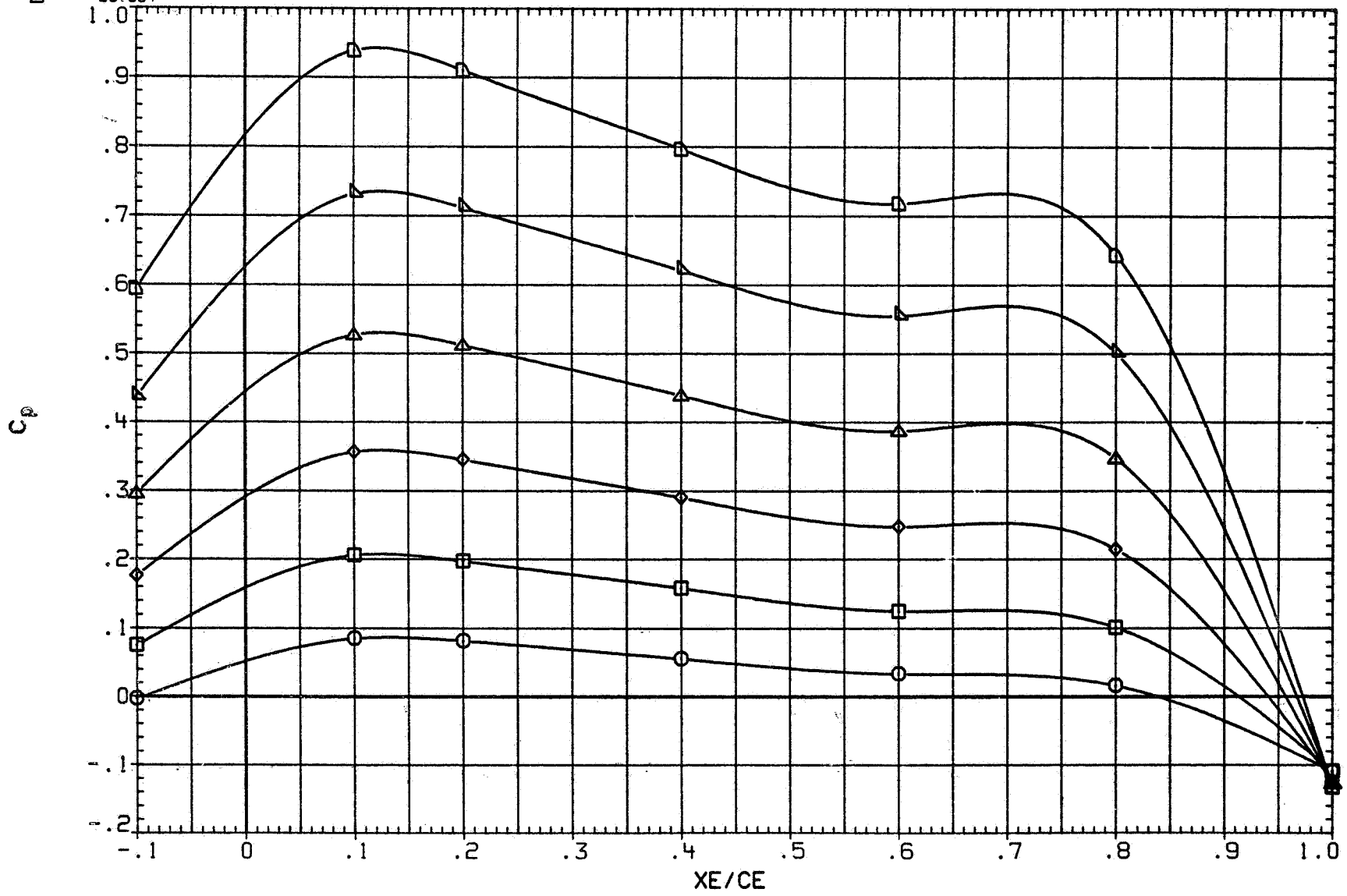


FIG.66 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

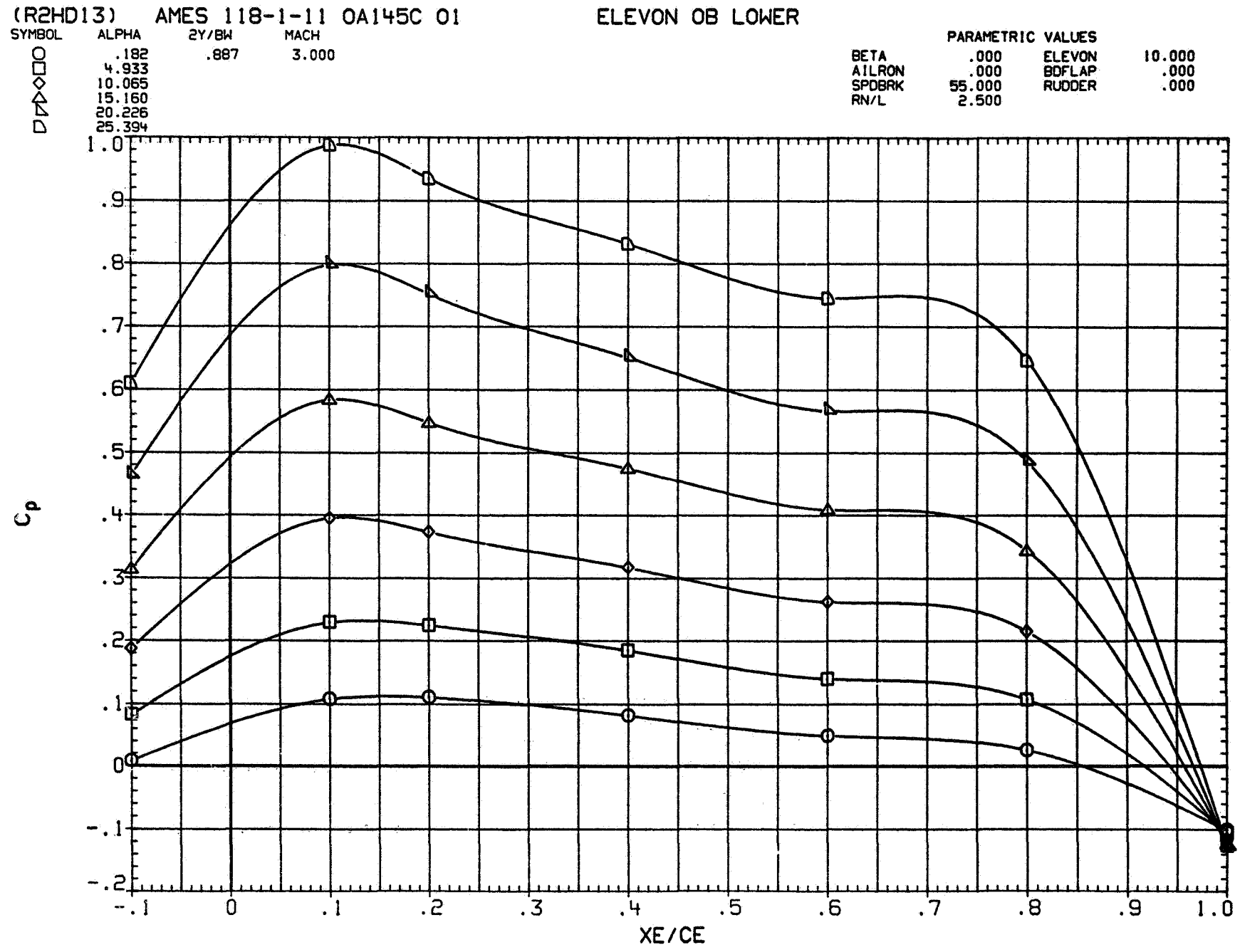


FIG.66 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HD13) AMES 118-1-11 0A145C 01 ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.960	3.000
□	4.933		
◇	10.065		
△	15.160		
◁	20.226		
D	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

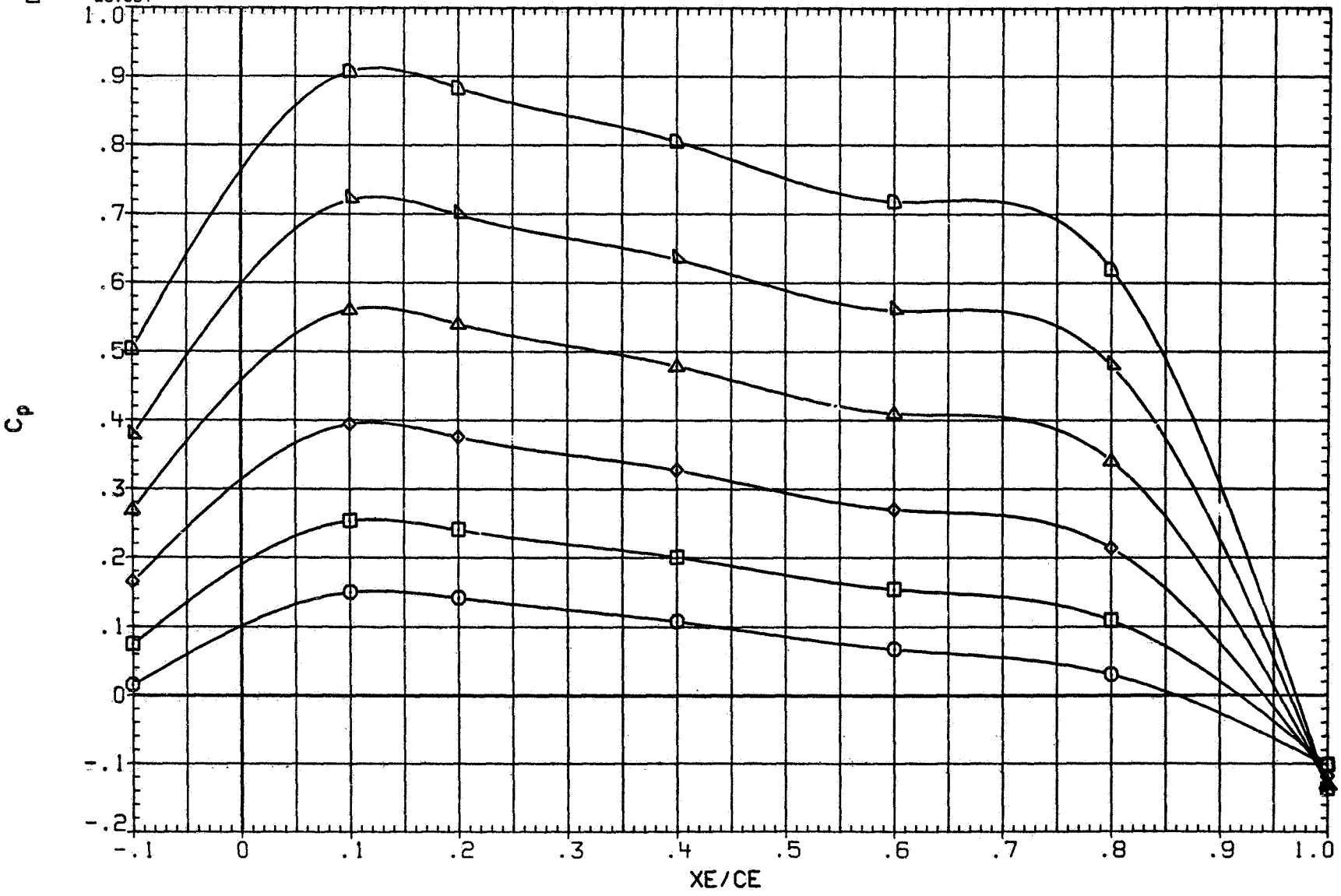


FIG.66 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HD16) AMES 118-1-11 0A145C 01 ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
O	.189	.715	3.001
□	5.024		
◇	10.117		
△	15.226		
◁	20.285		
▷	25.372		

PARAMETRIC VALUES

BETA	.000	ELEVON	-10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

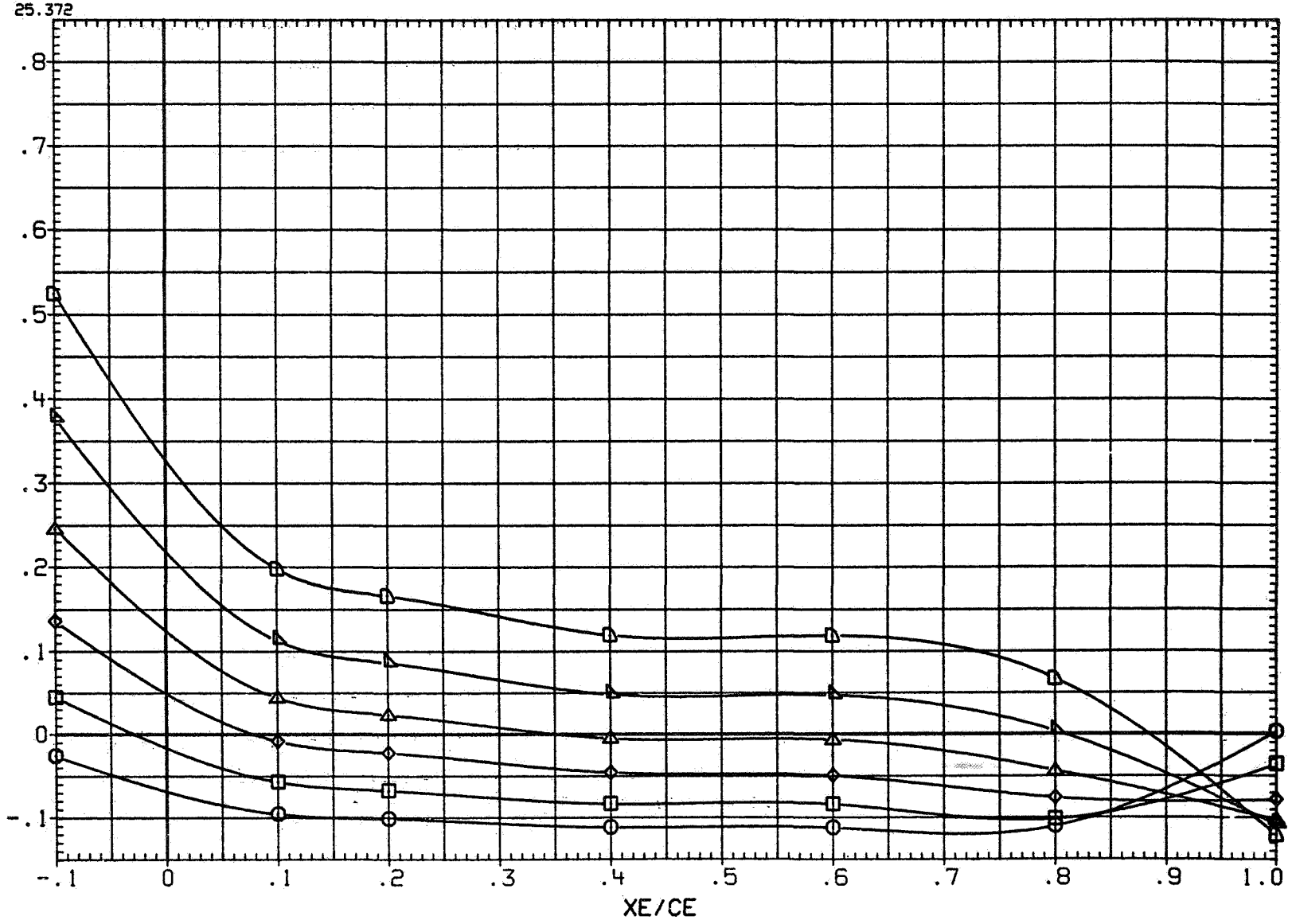


FIG.67 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

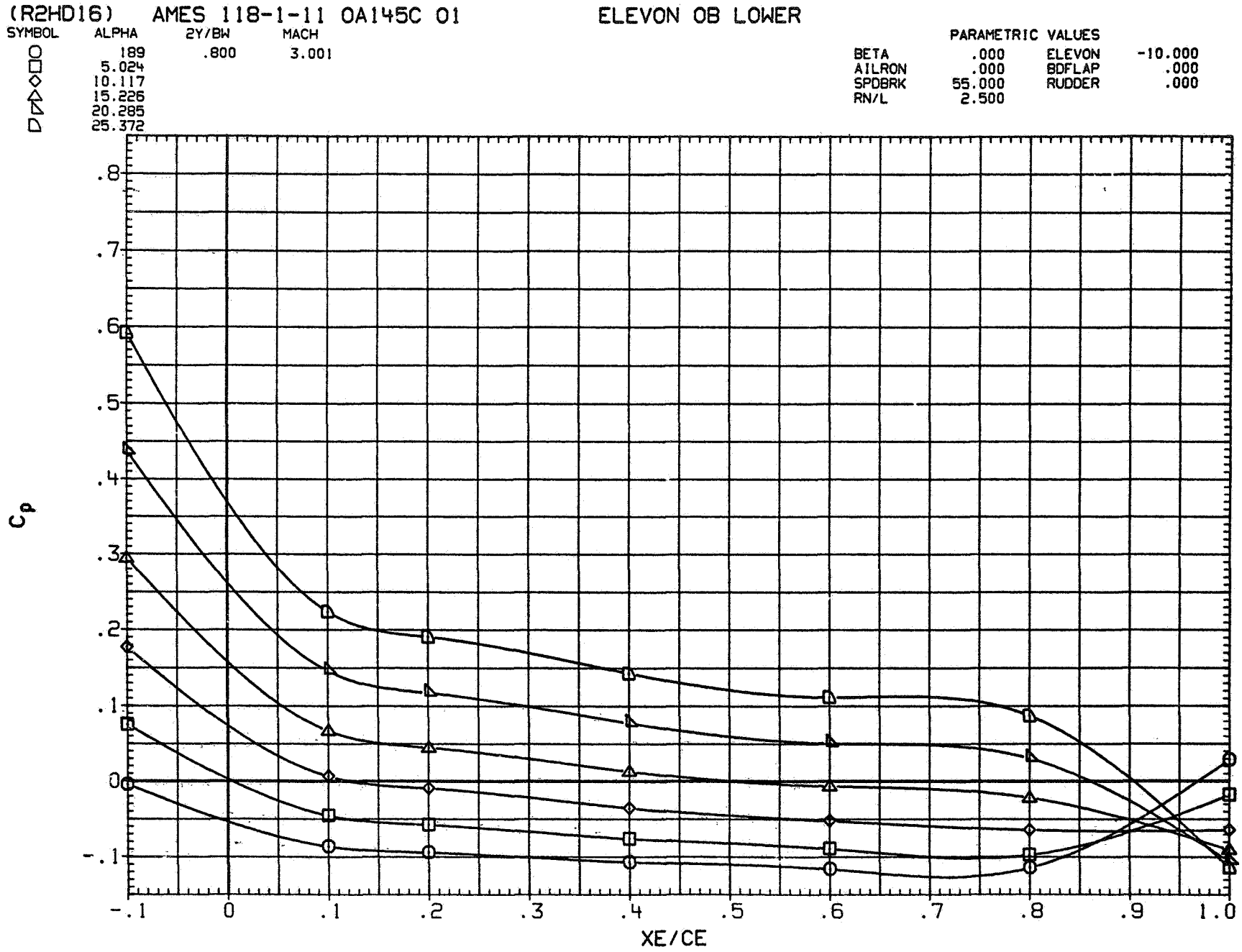


FIG.67 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

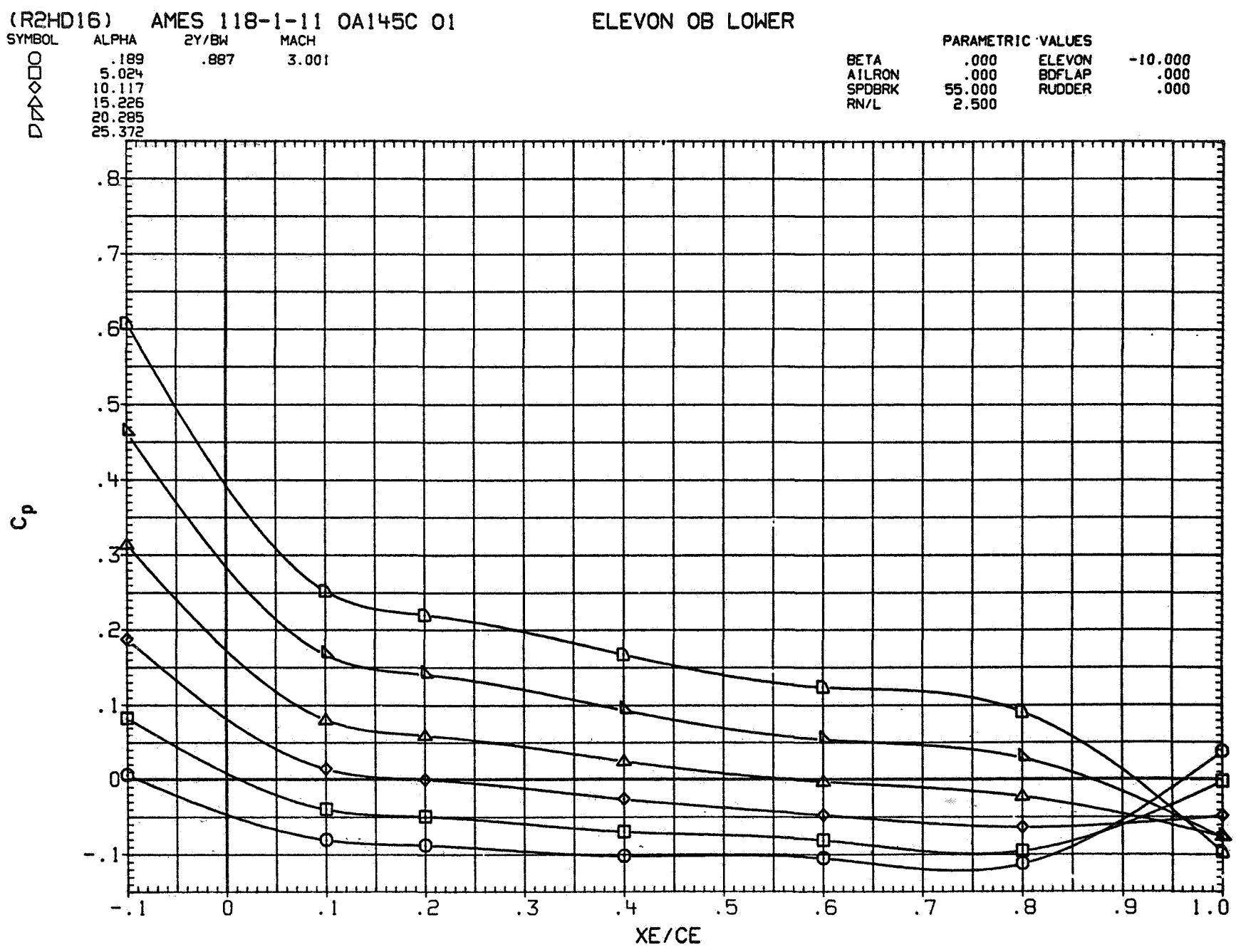


FIG.67 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

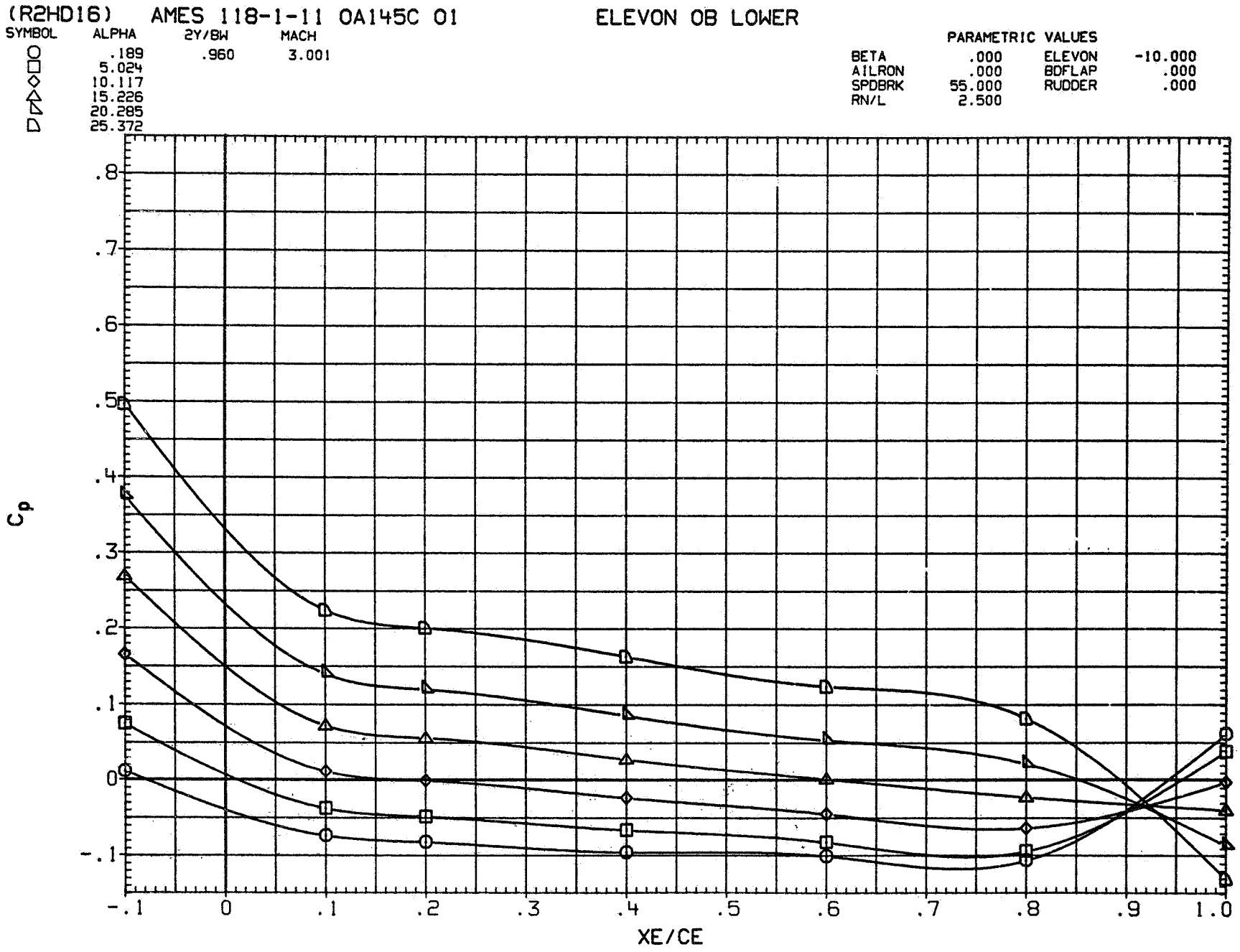


FIG.67 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

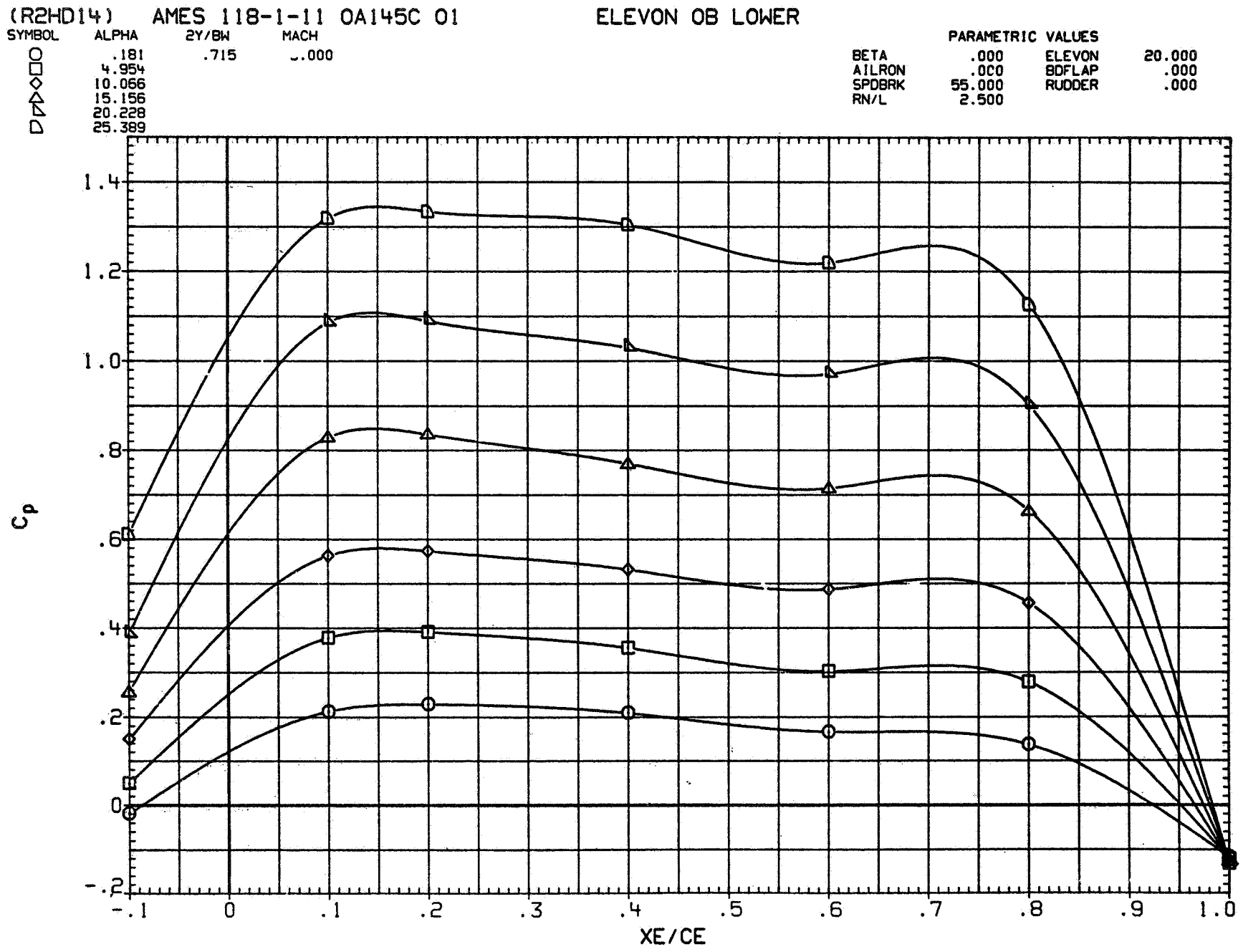


FIG.68 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

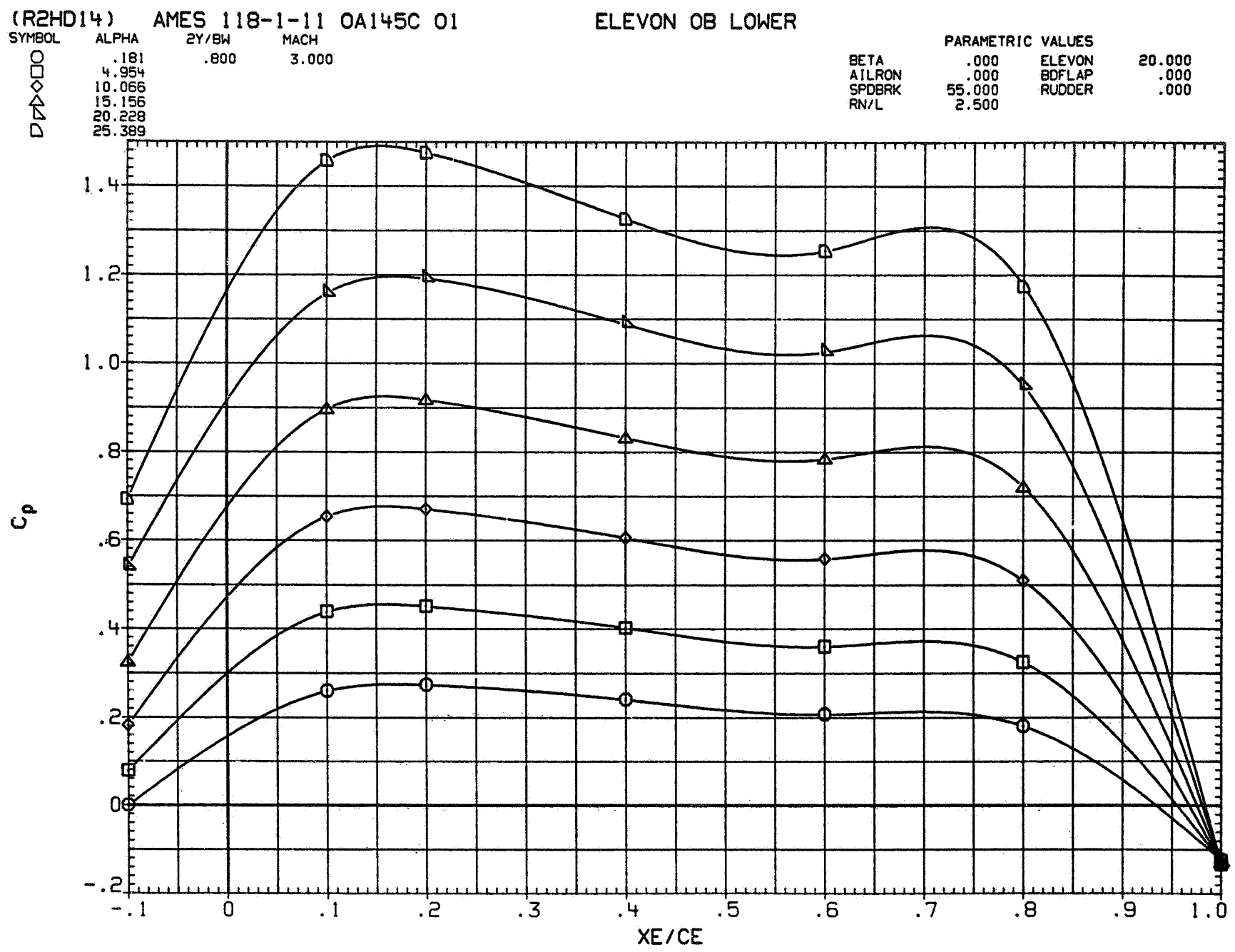


FIG.68 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

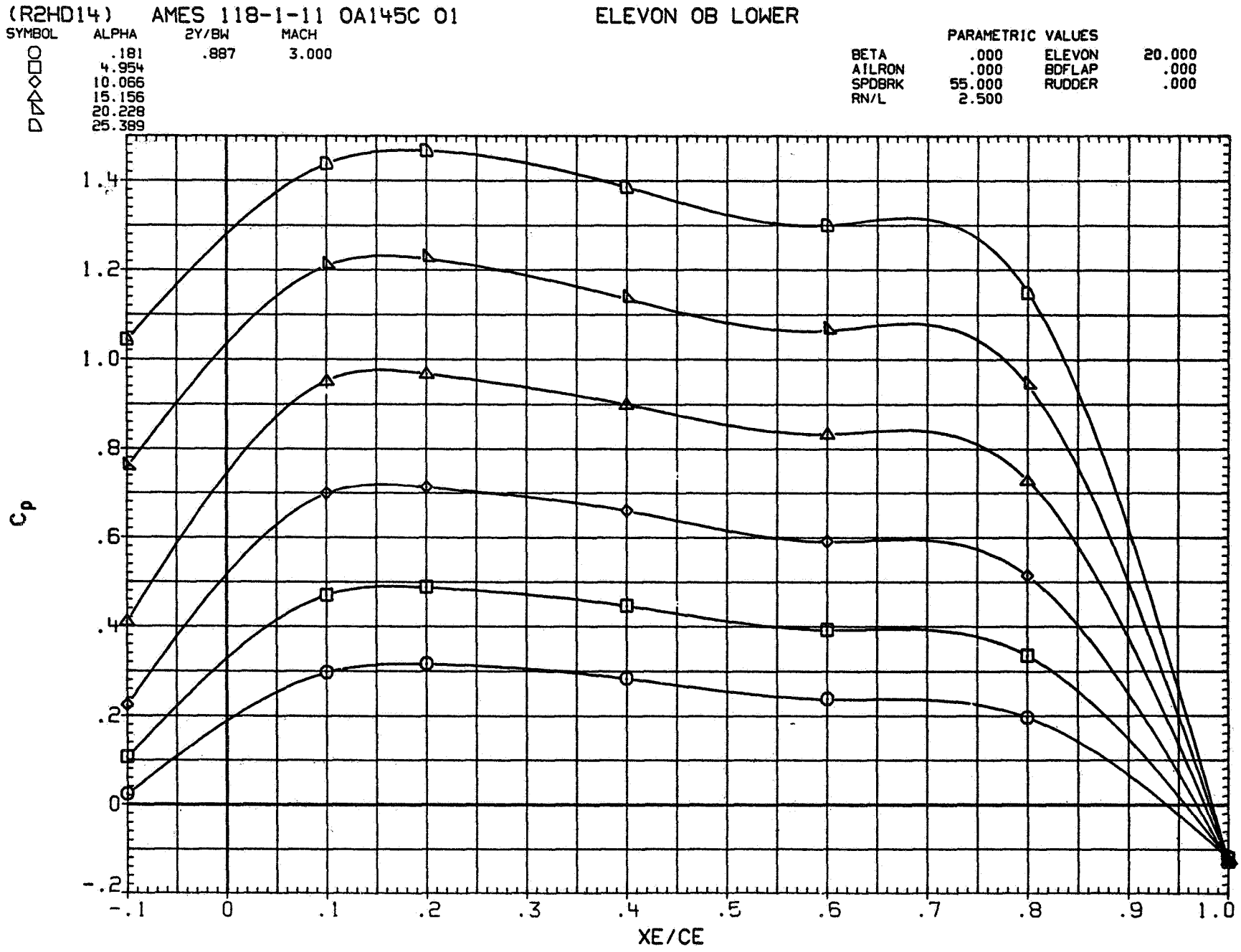


FIG.68 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

(R2HD14) AMES 118-1-11 OA145C 01 ELEVON OF LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.181	.960	3.000
□	4.954		
◇	10.066		
△	15.156		
◁	20.228		
▷	25.389		

PARAMETRIC VALUES

BETA	.000	ELEVON	20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

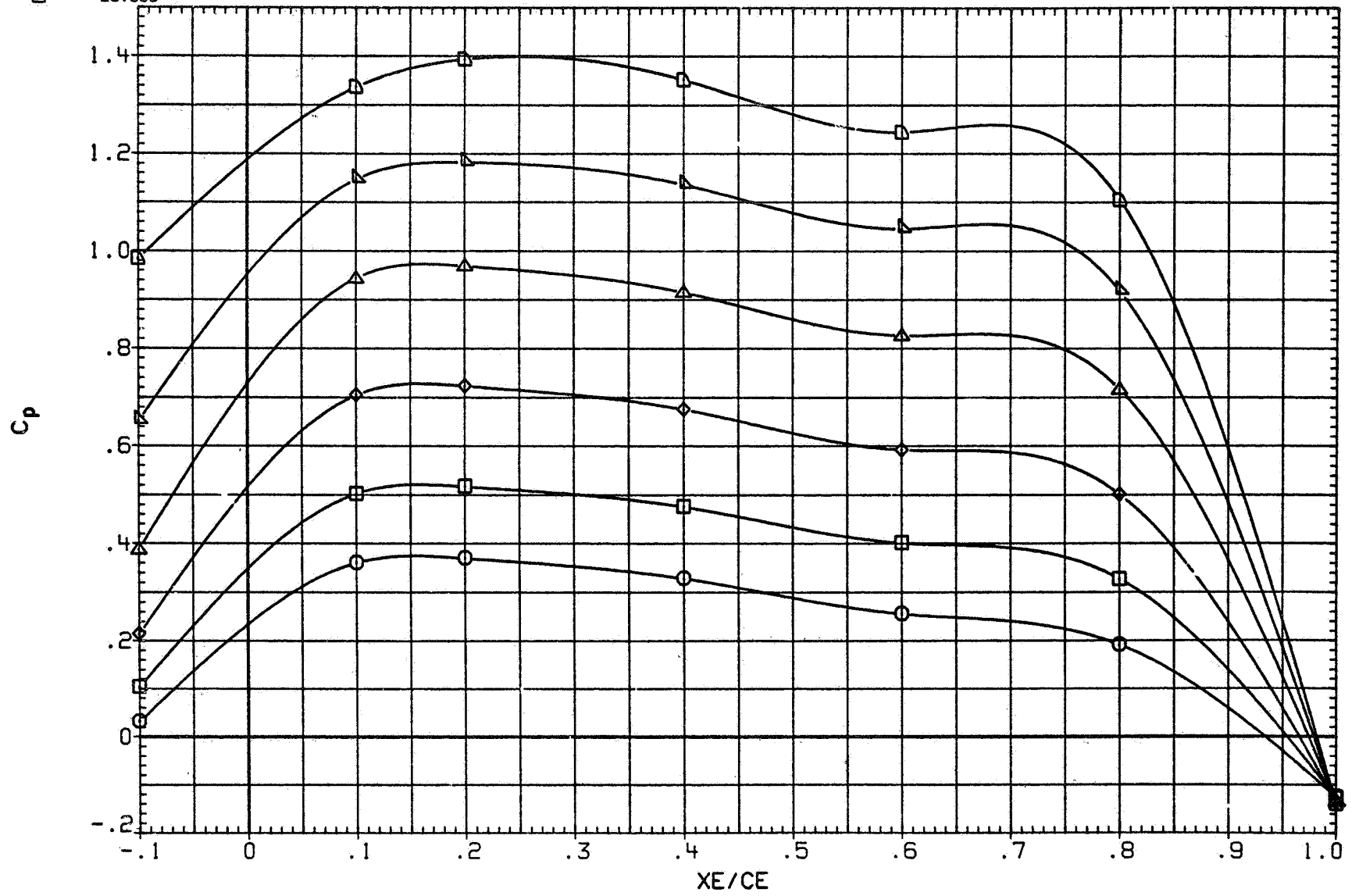


FIG.68 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

(R2HD17) AMES 118-1-11 OA145C 01 ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.180	.715	3.001
□	5.058		
◇	10.092		
△	15.201		
◁	20.272		
▱	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

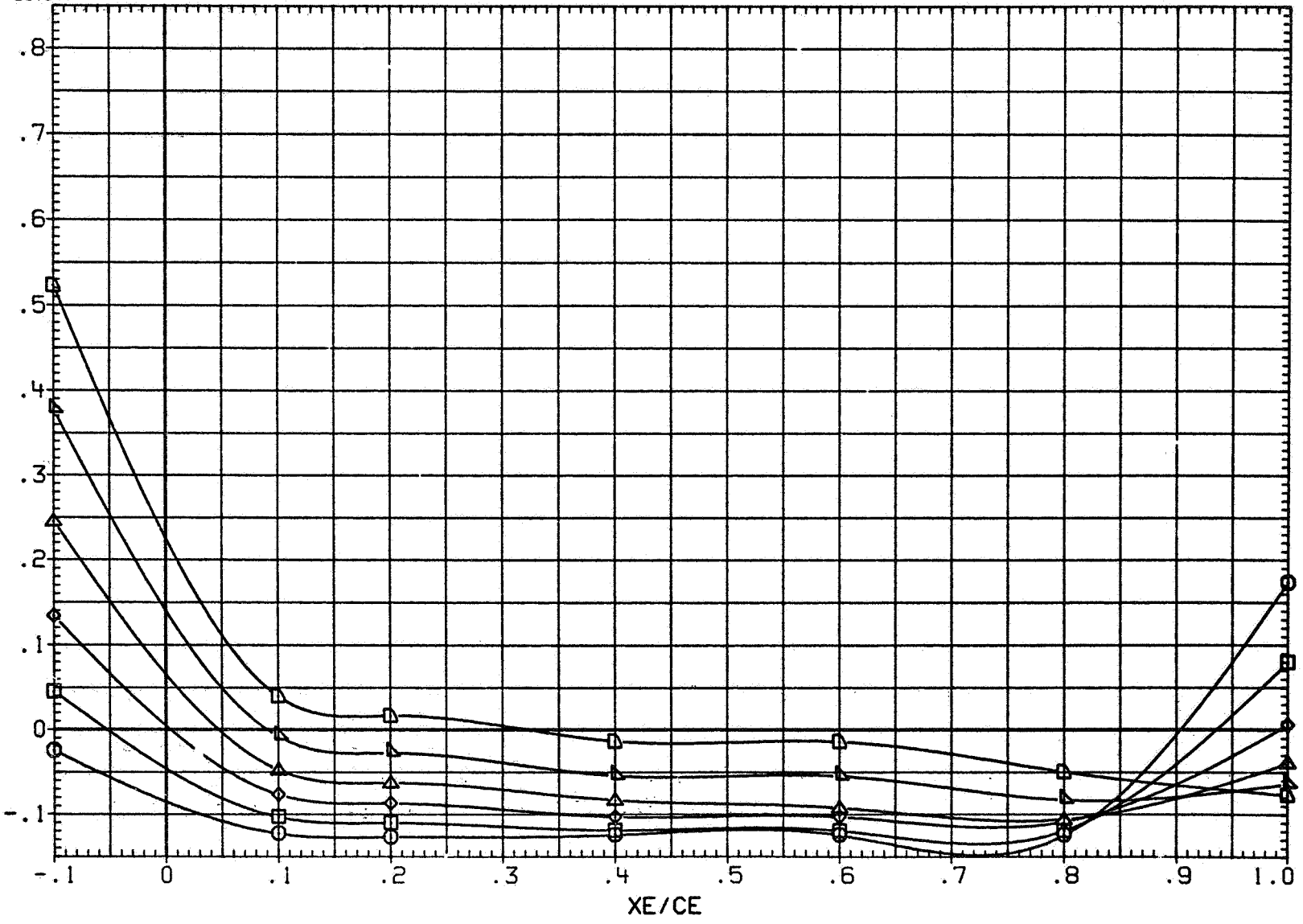


FIG.69 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

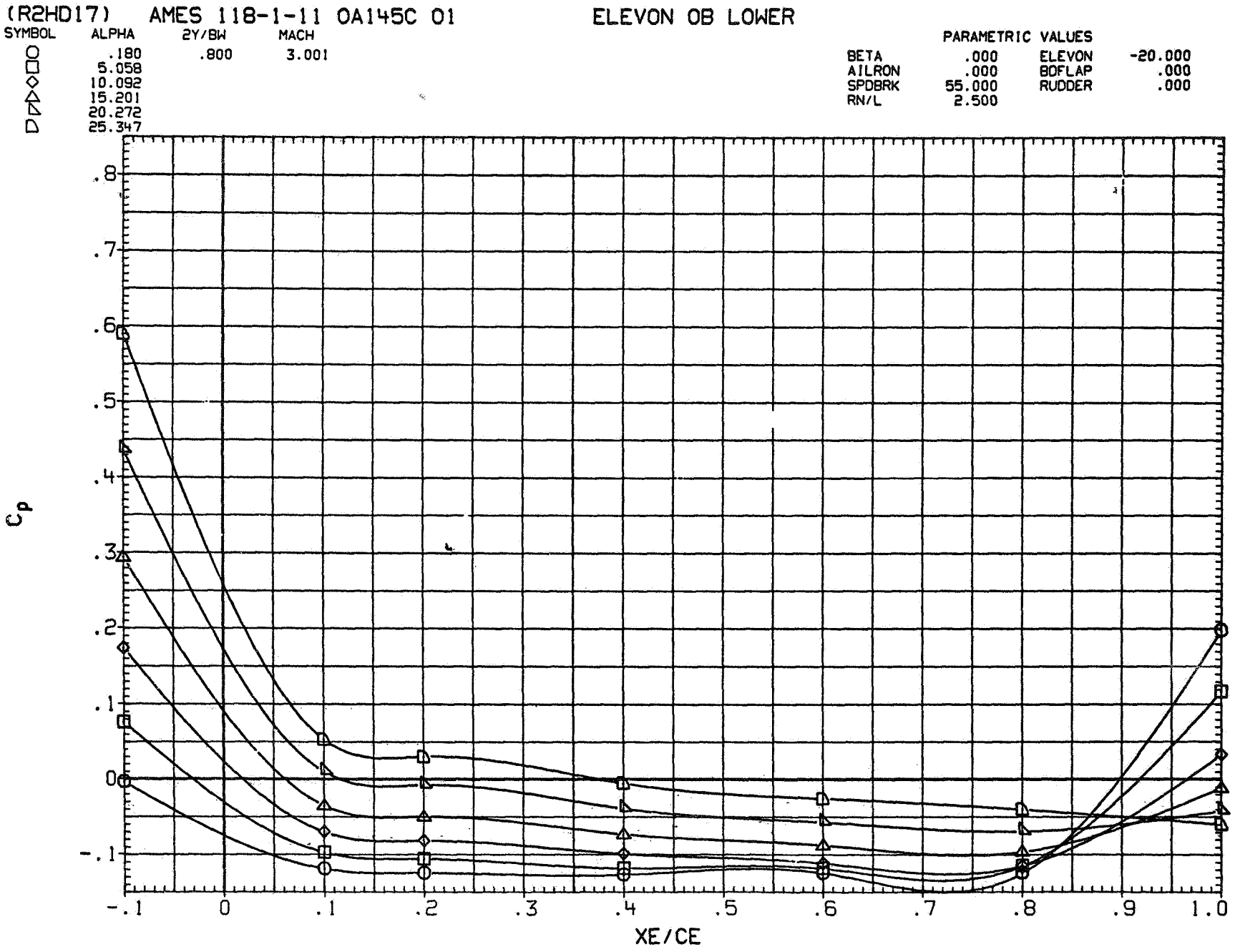


FIG.69 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

(R2HD17) AMES 118-1-11 OA145C 01 ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.180	.887	3.001
□	5.058		
◇	10.092		
△	15.201		
◁	20.272		
▷	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

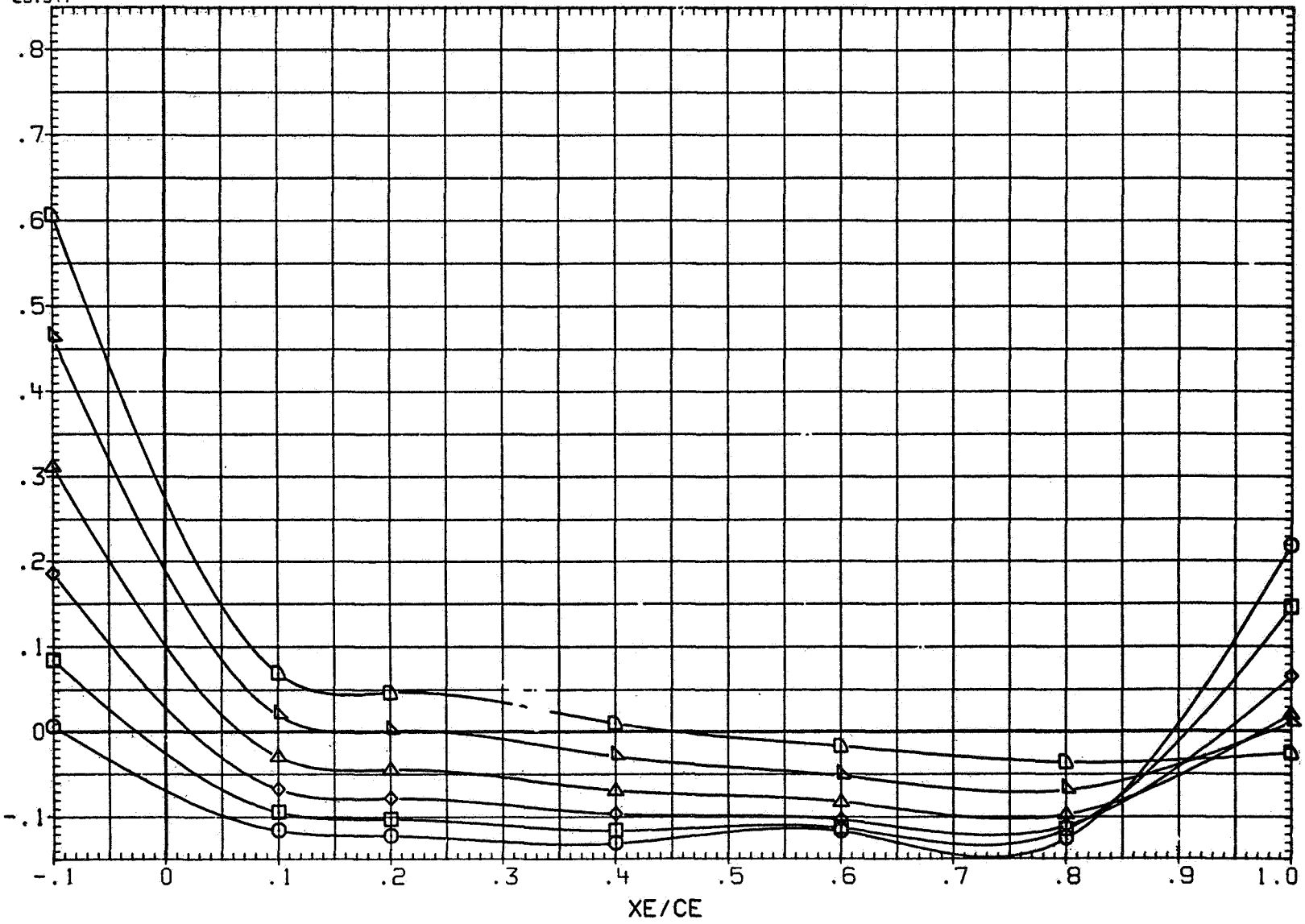


FIG.69 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

(R2HD17) AMES 118-1-11 0A145C 01

ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.180	.960	3.001
□	5.058		
◇	10.092		
△	15.201		
◁	20.272		
▷	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

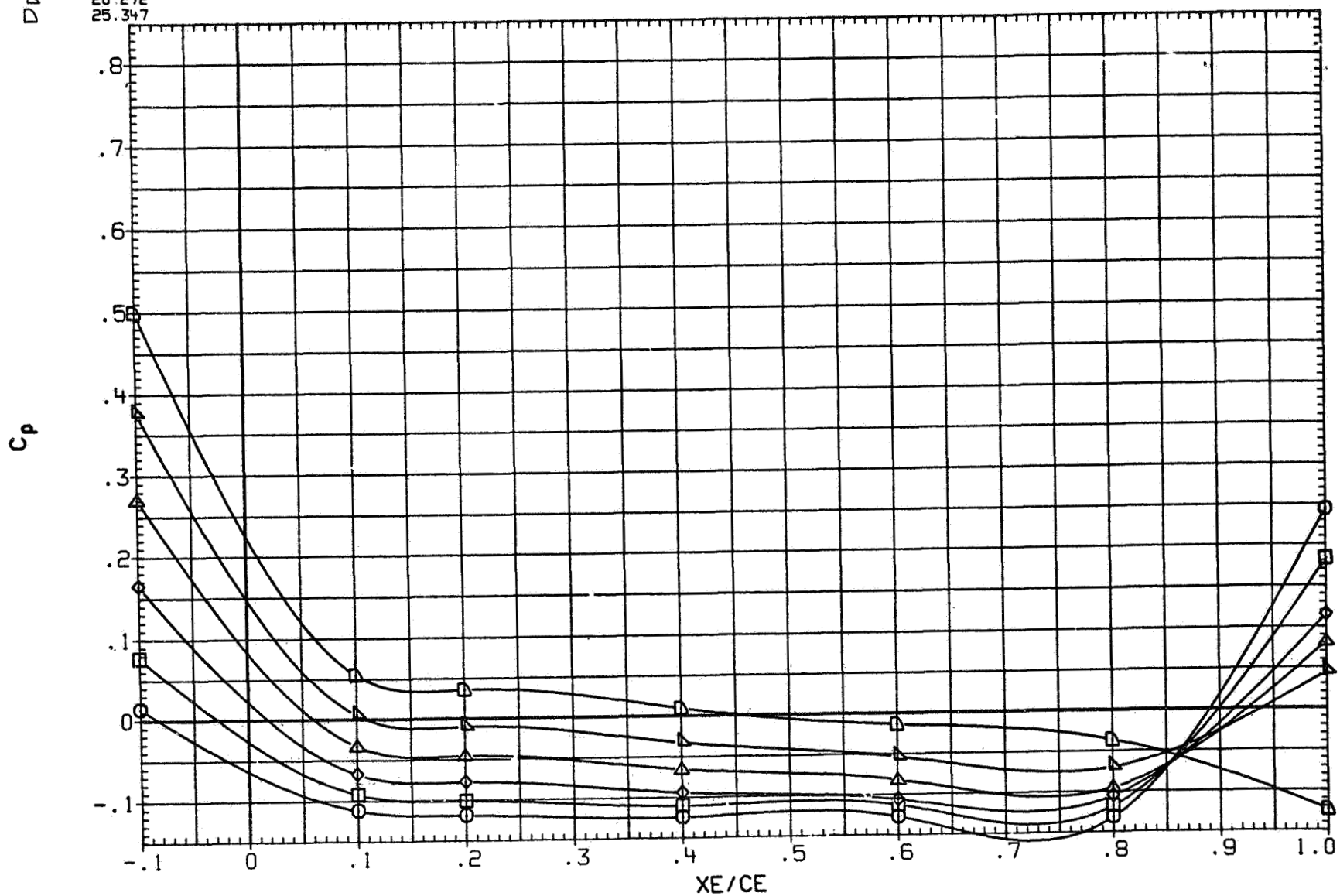


FIG.69 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

(R2HD18) AMES 118-1-11 0A145C 01 ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.183	.715	3.001
□	5.026		
◇	10.092		
△	15.197		
◁	20.276		
▷	25.519		

PARAMETRIC VALUES

BETA	.000	ELEVON	-35.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

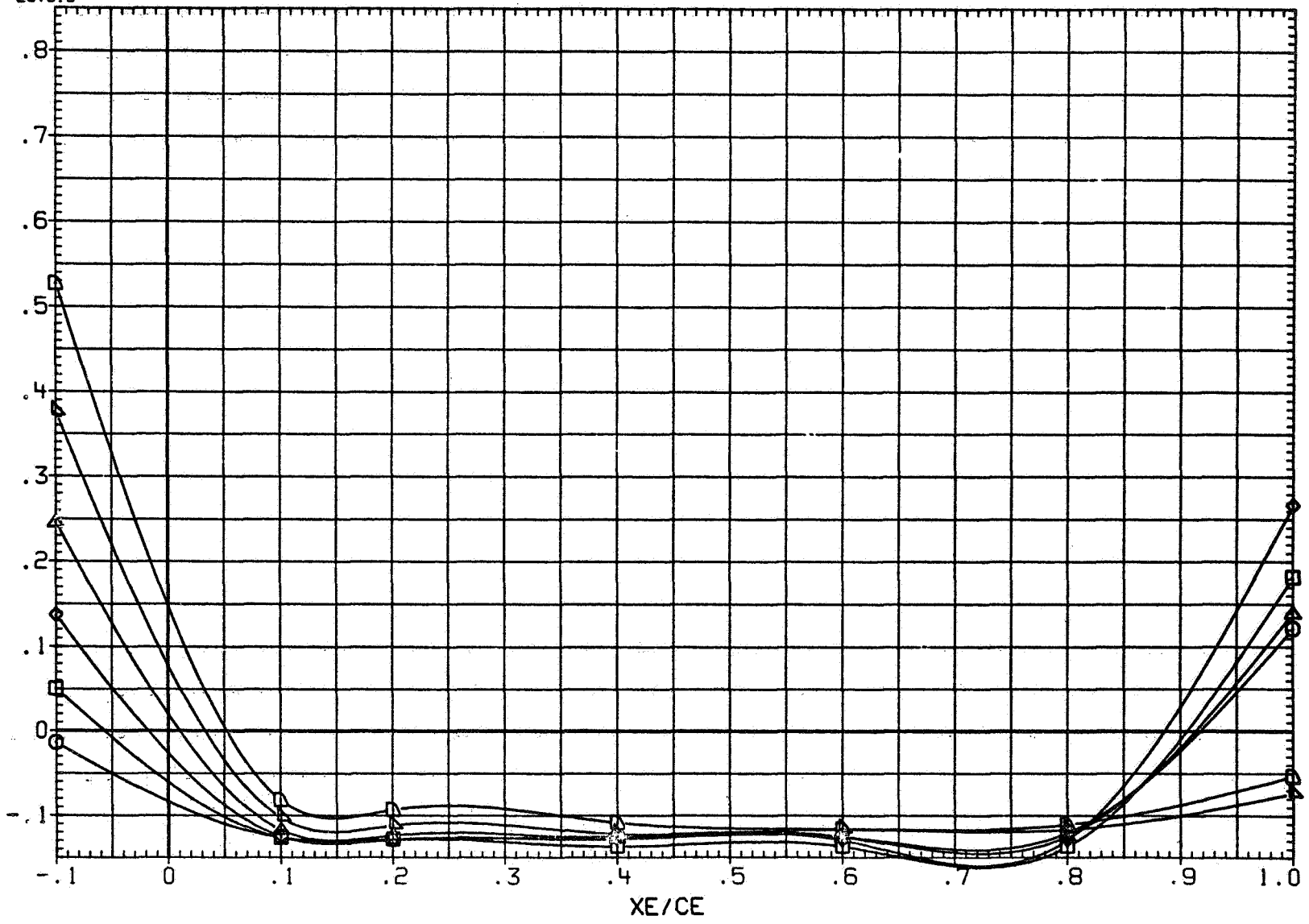


FIG.70 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

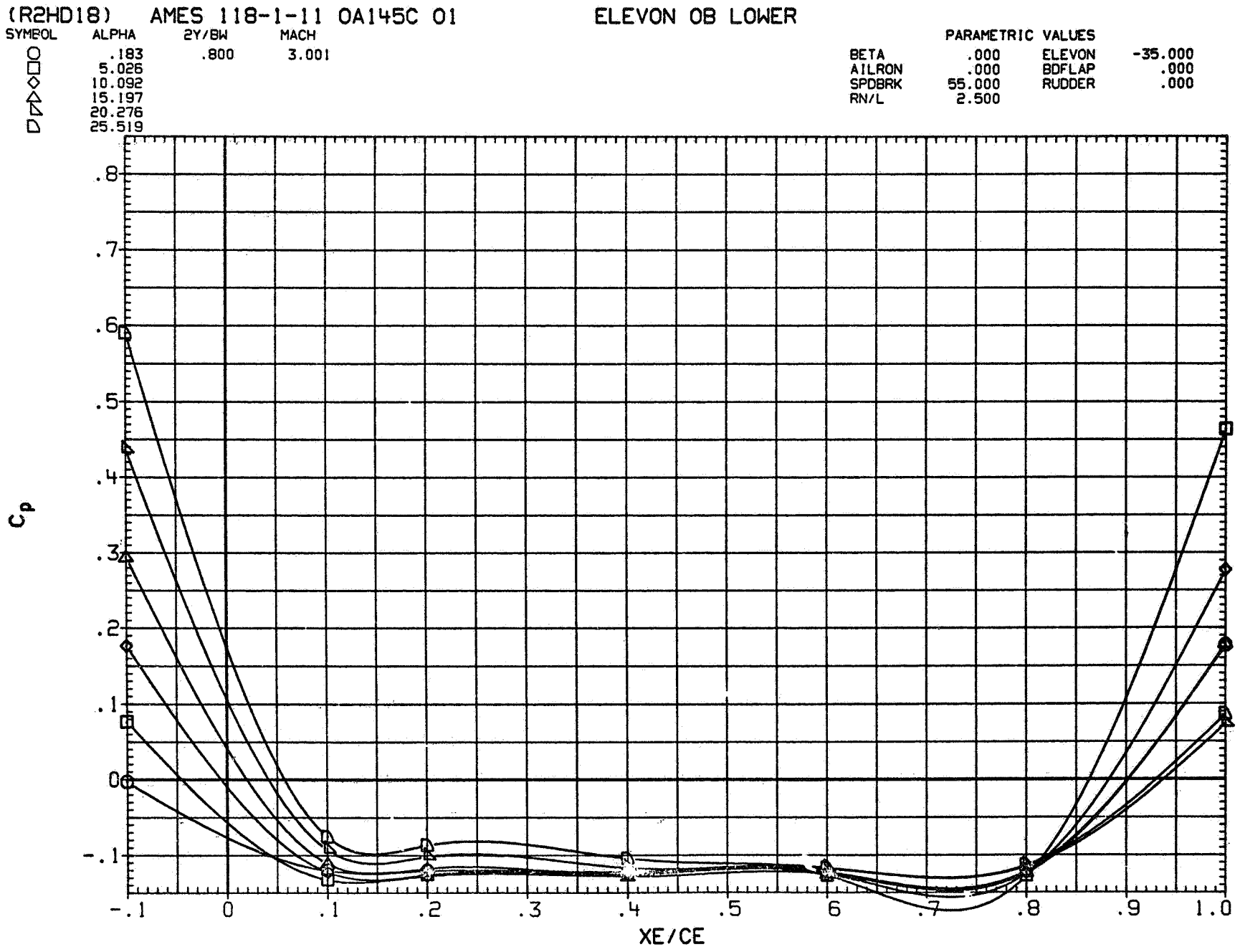


FIG.70 0A145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

(R2HD18) AMES 118-1-11 OA145C 01 ELEVON OB LOWER

SYMBOL	ALPHA	2Y/BW	MACH
○	.183	.887	3.001
□	5.026		
◇	10.092		
◁	15.197		
△	20.276		
▱	25.519		

PARAMETRIC VALUES

BETA	.000	ELEVON	-35.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

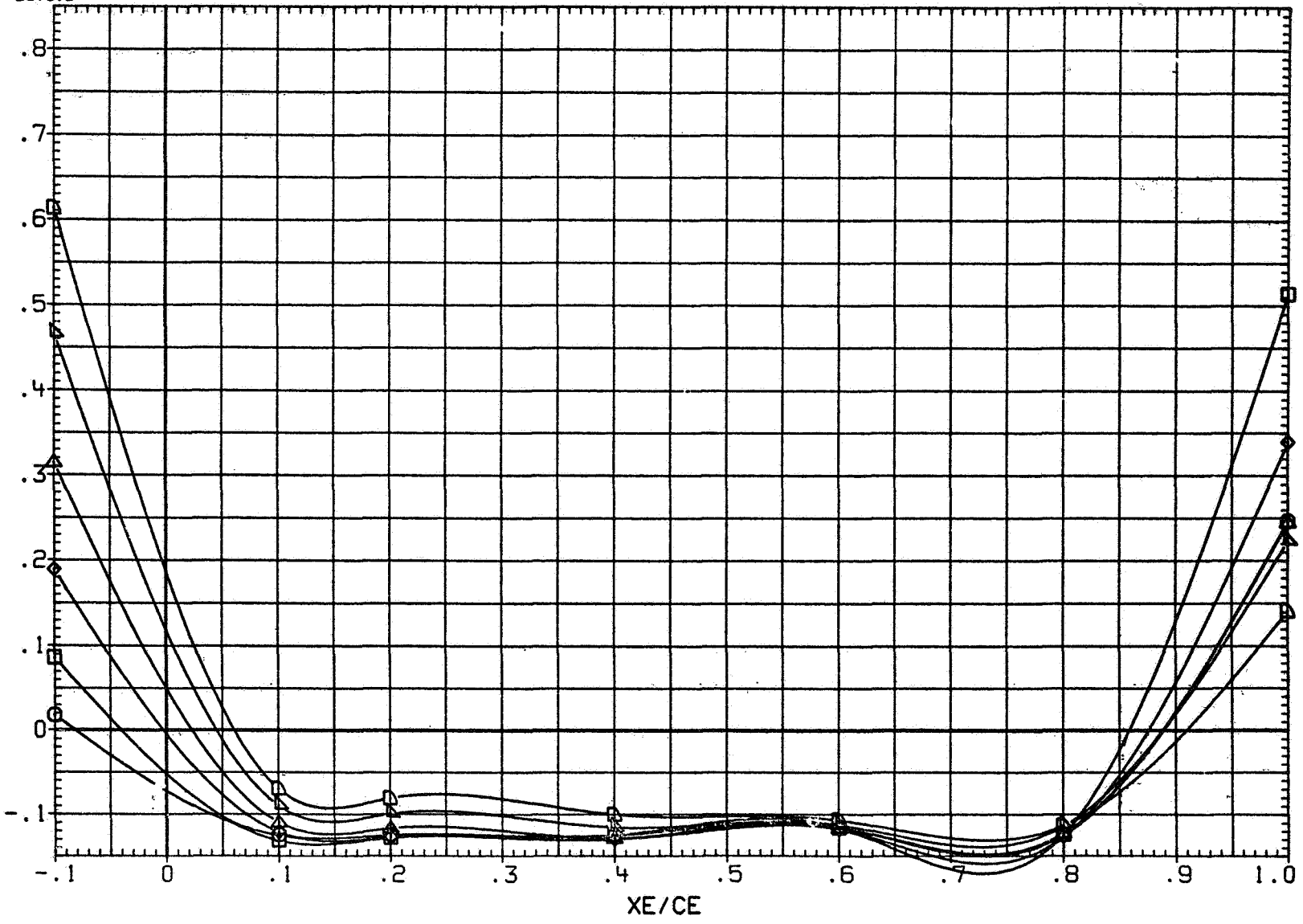


FIG.70 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

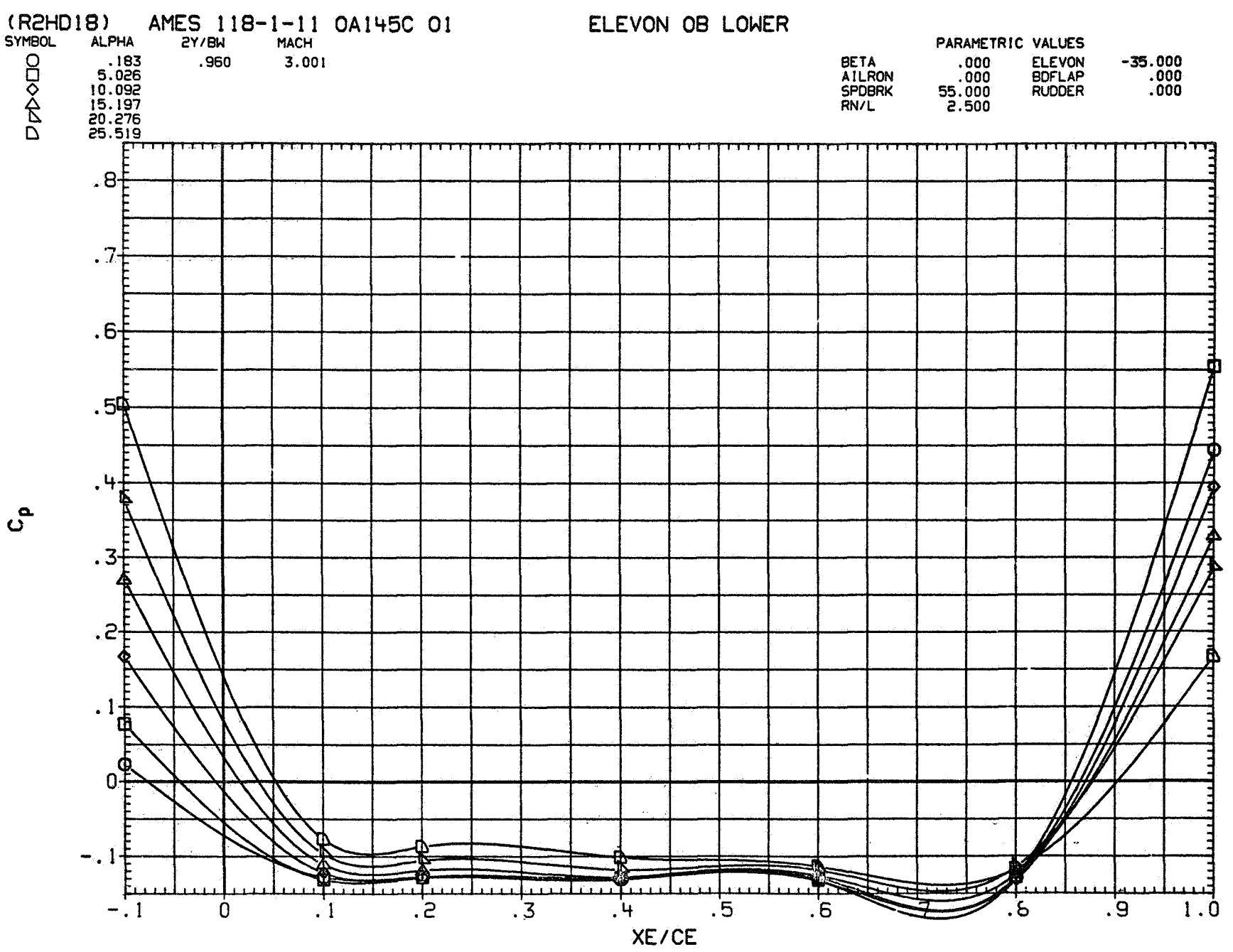


FIG.70 OA145C ELEVON CP VS. XE/CE
OUTBOARD LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

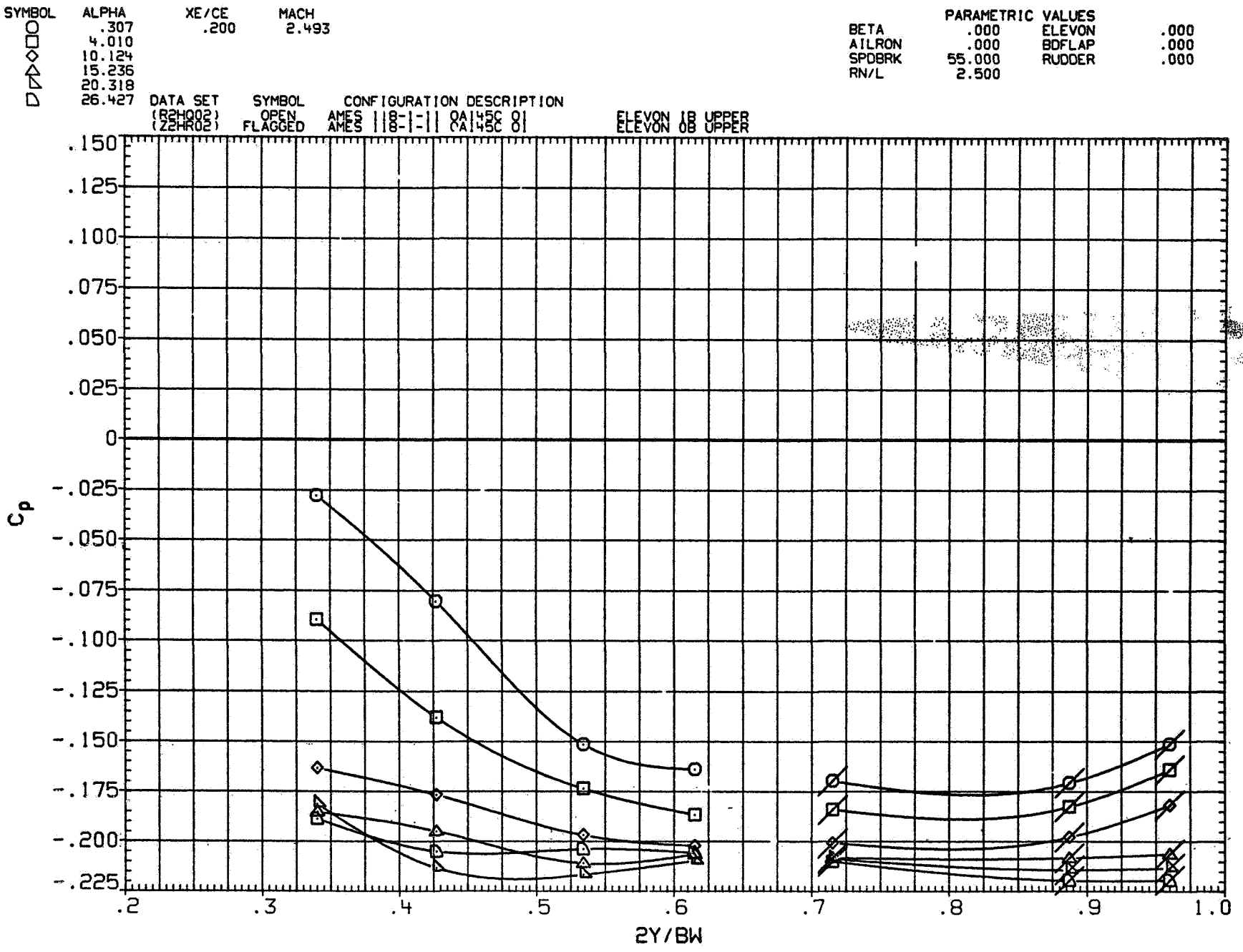


FIG.71 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

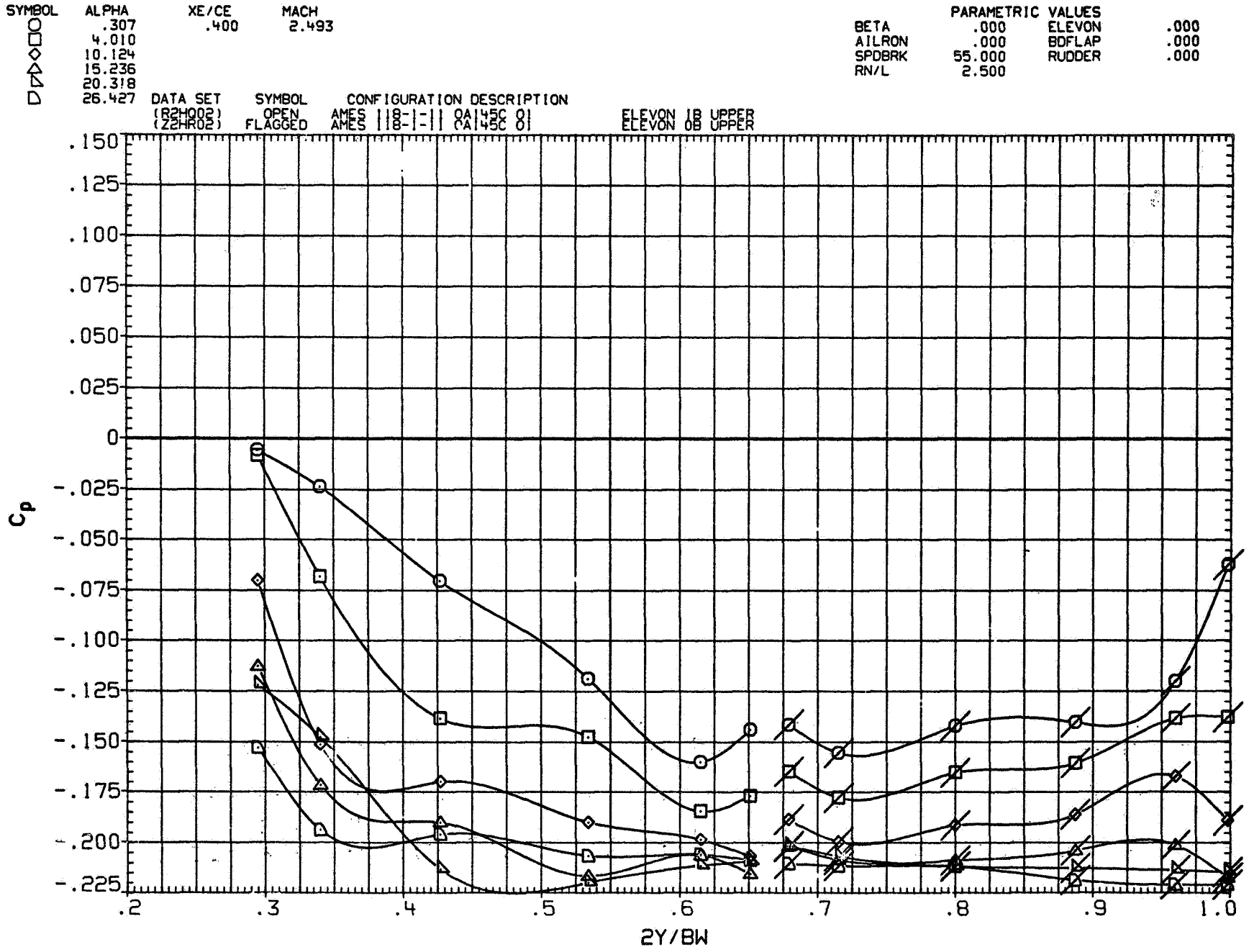


FIG.71 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

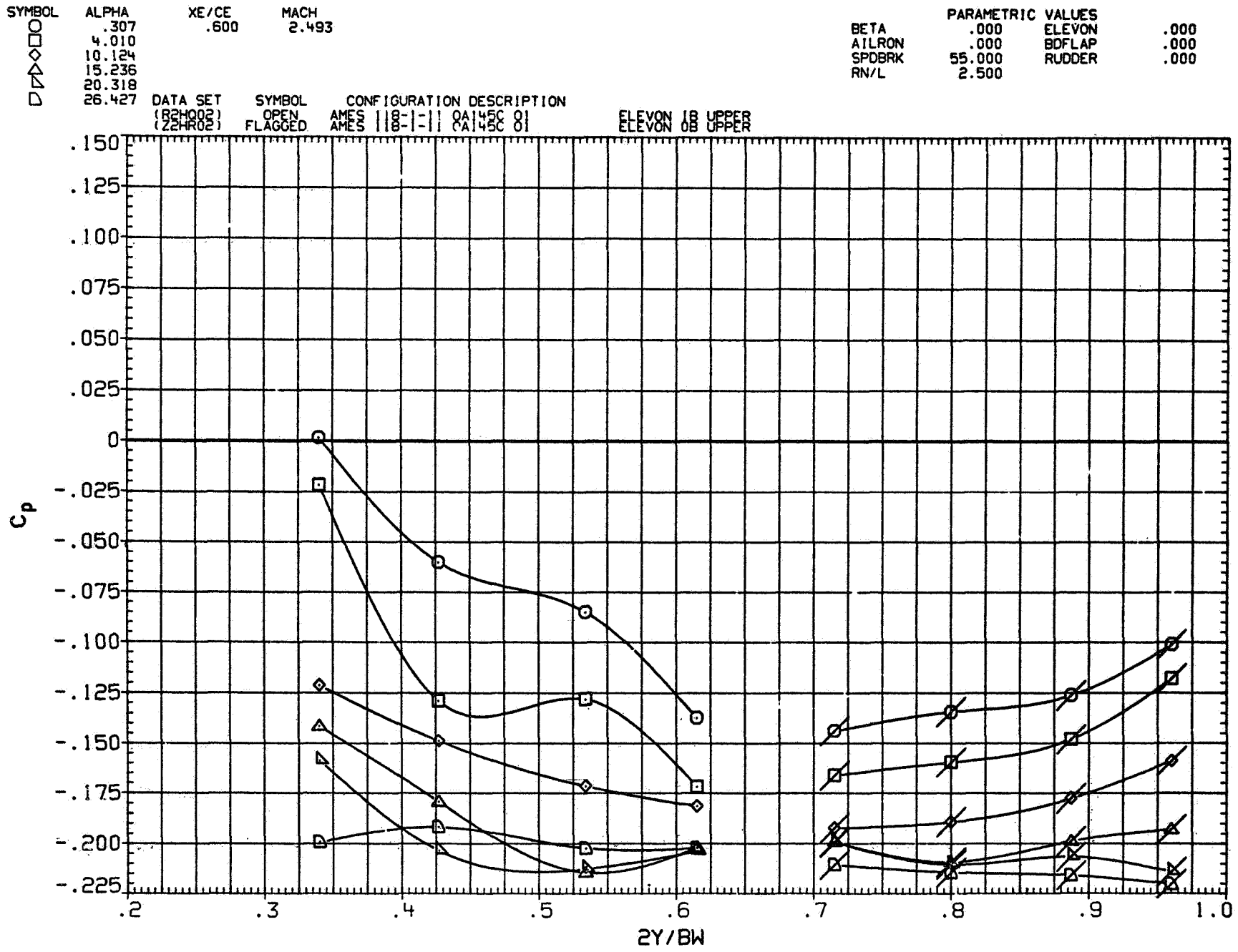


FIG.71 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

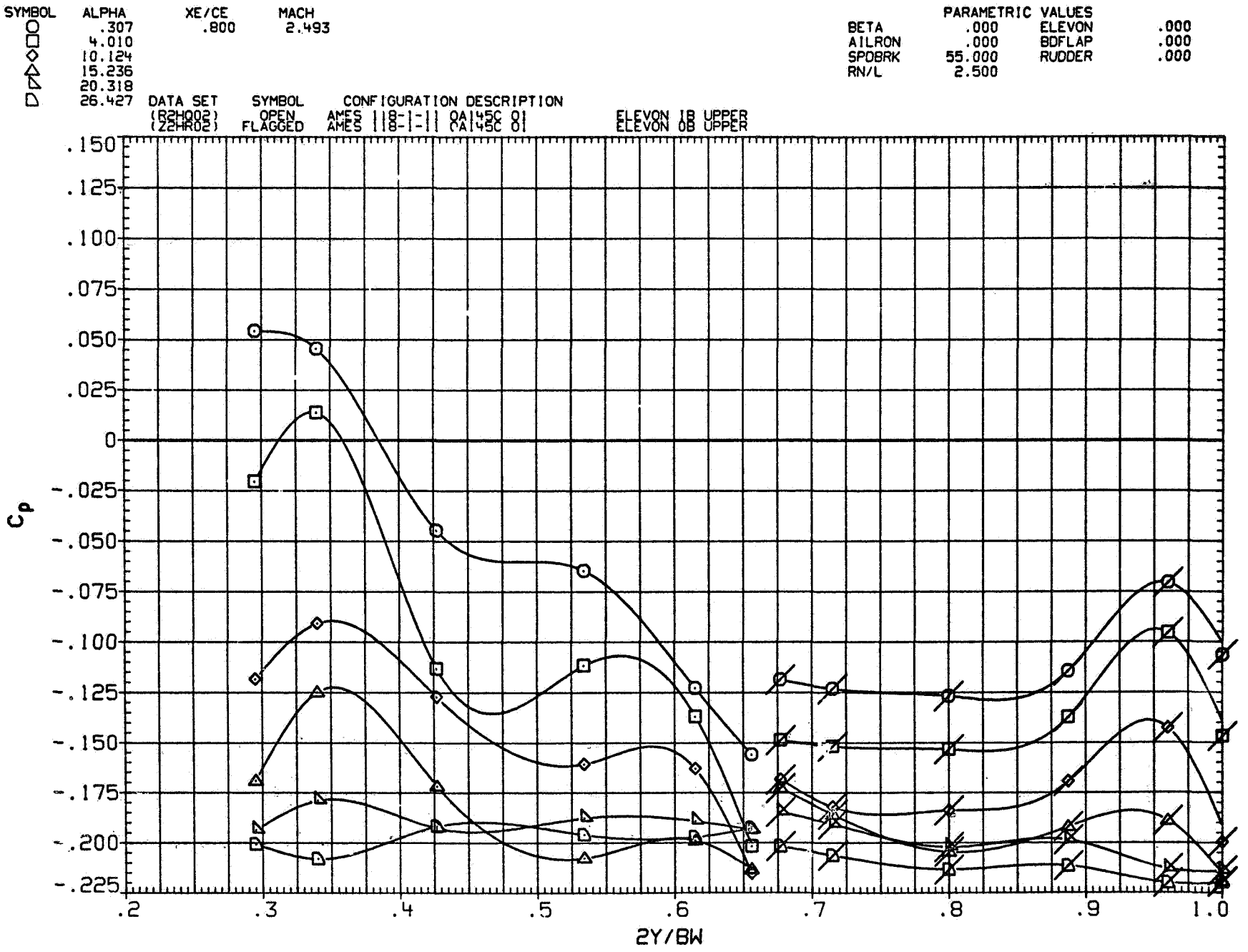


FIG.71 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

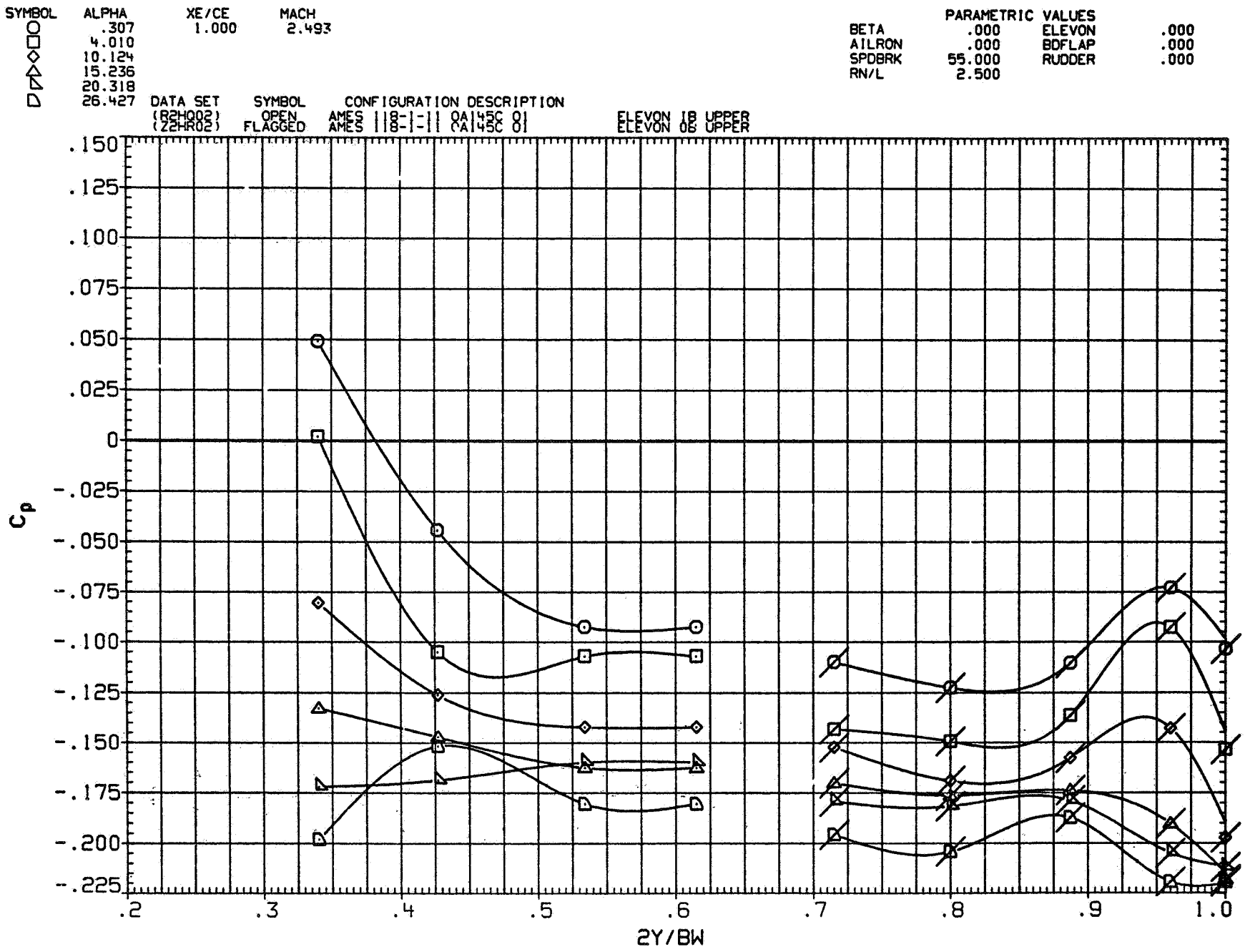


FIG.71 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

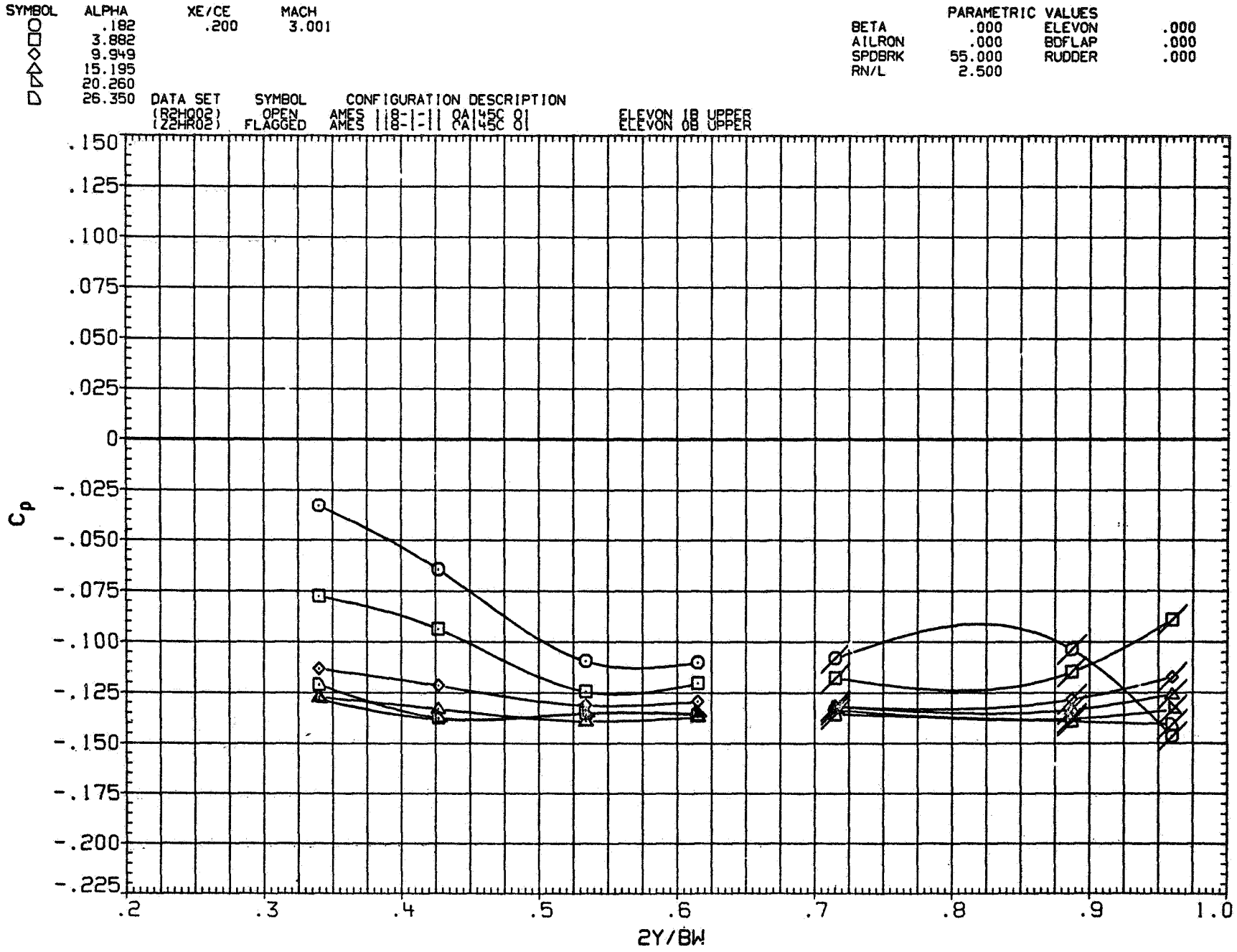


FIG.71 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

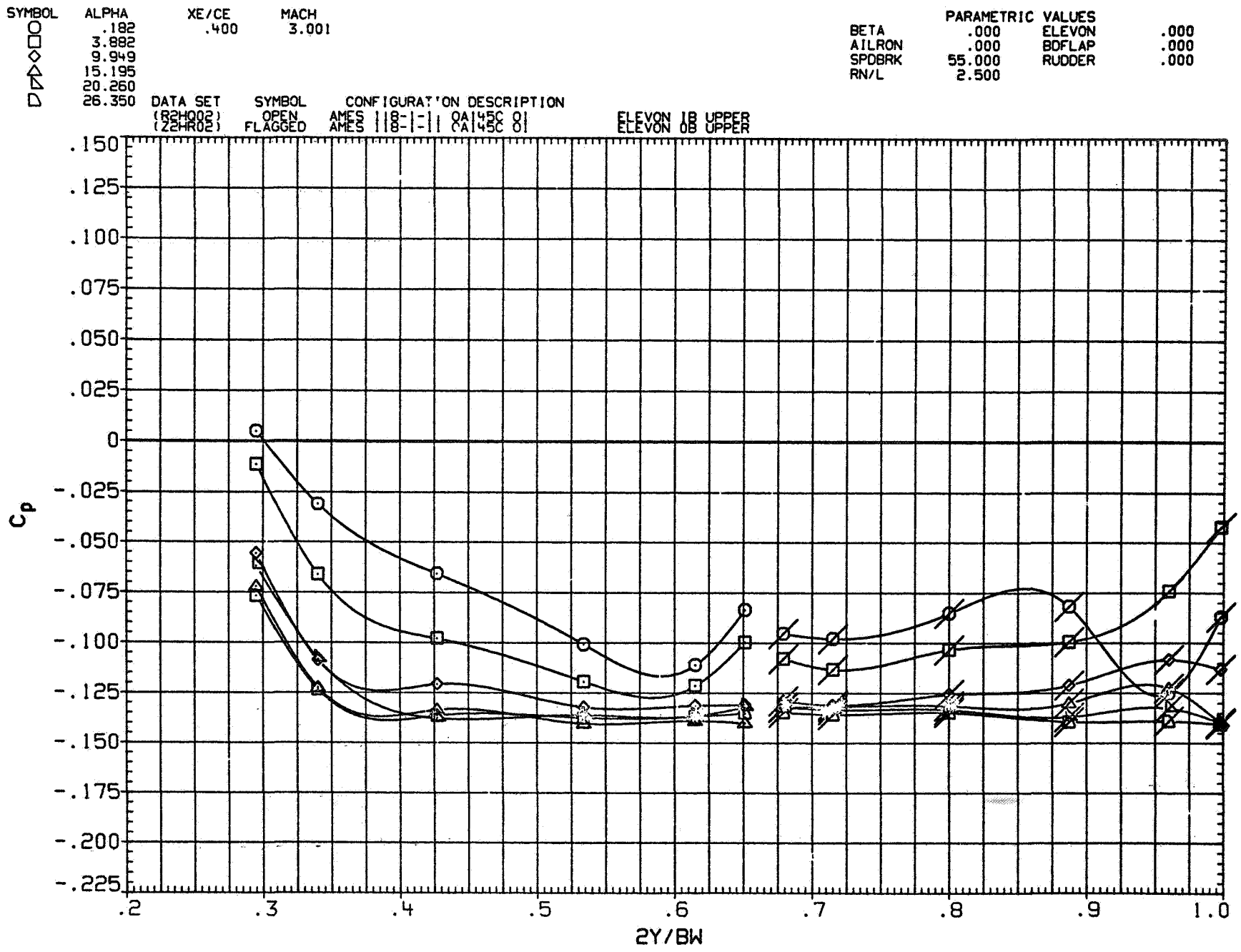


FIG.71 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

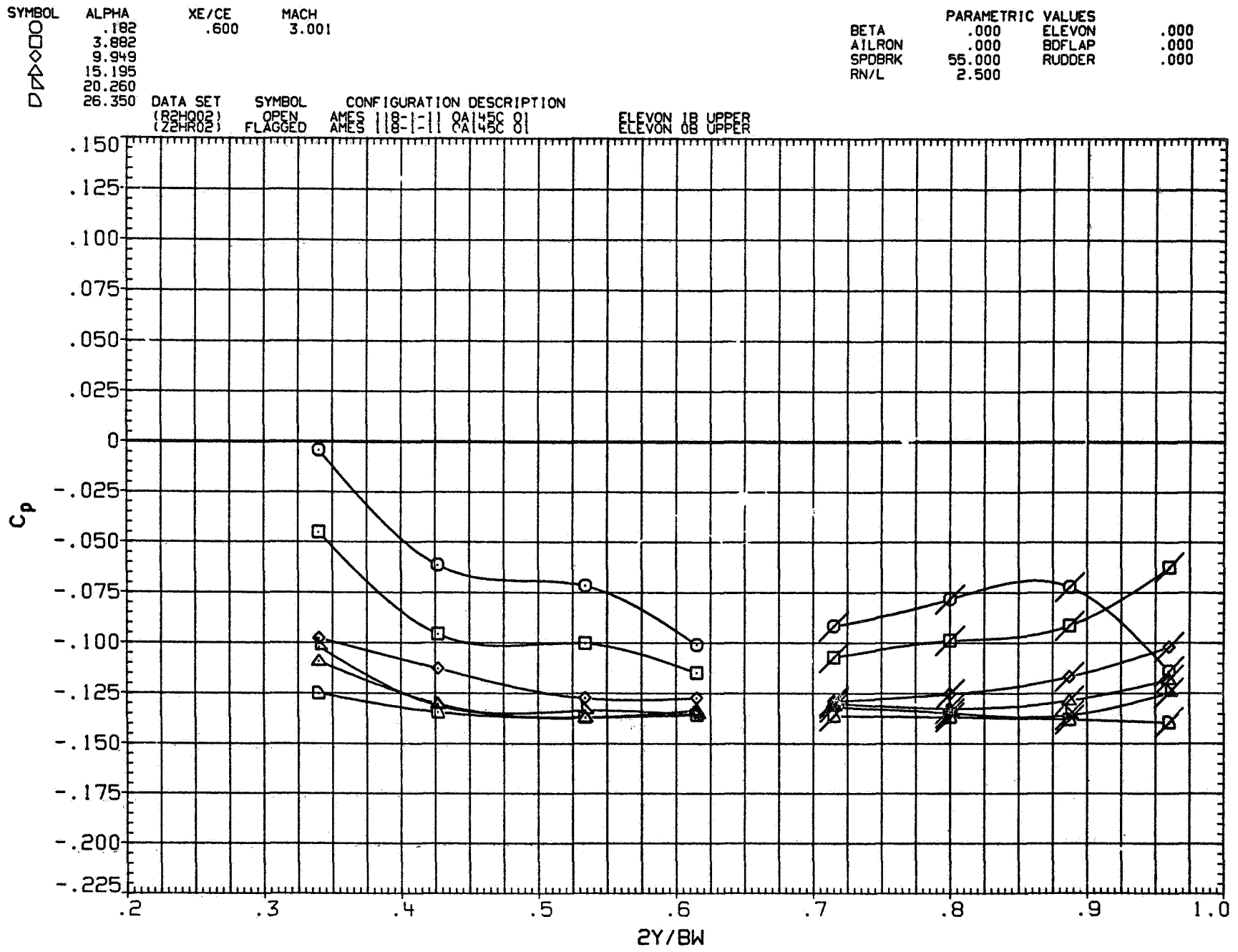


FIG.71 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

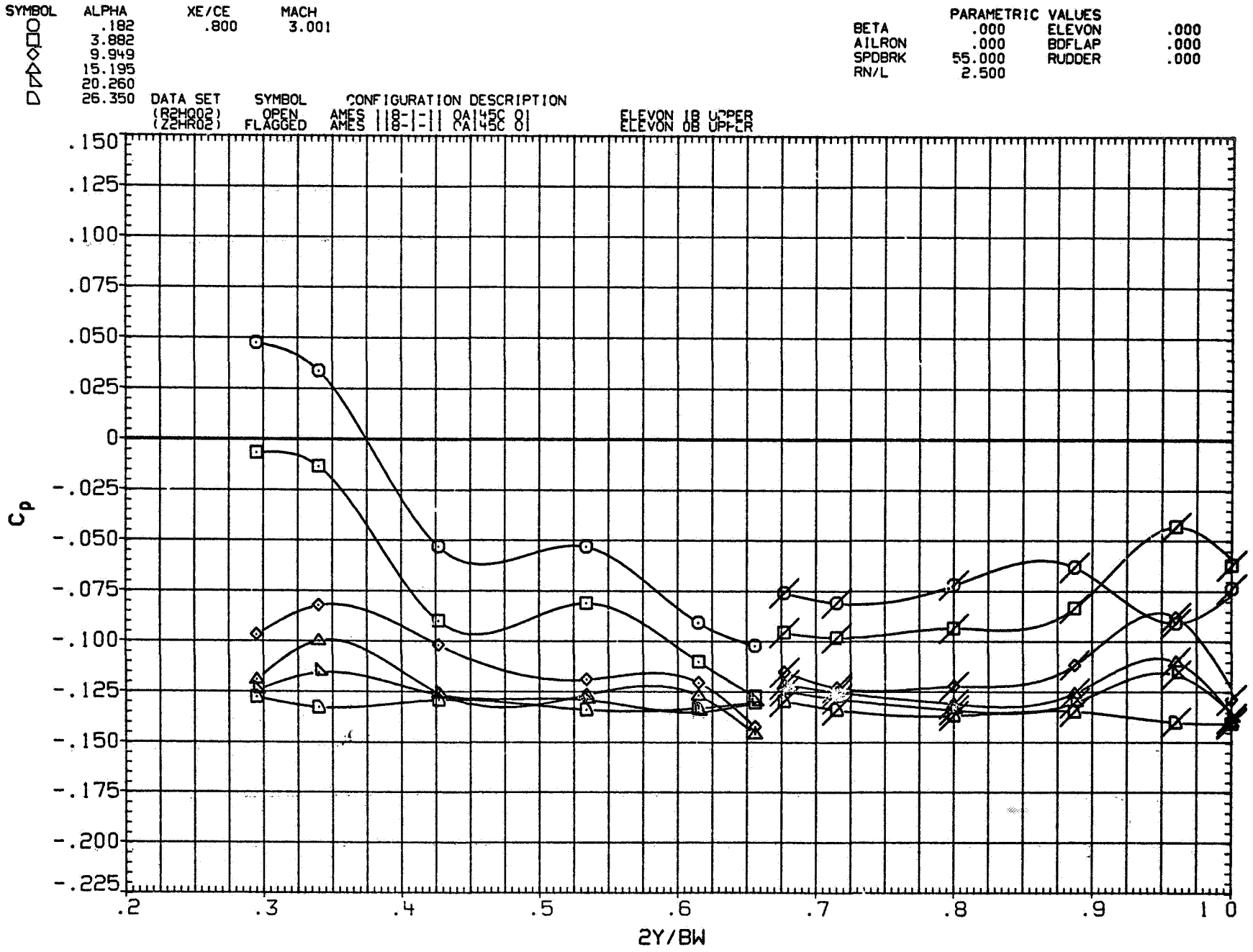


FIG.71 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

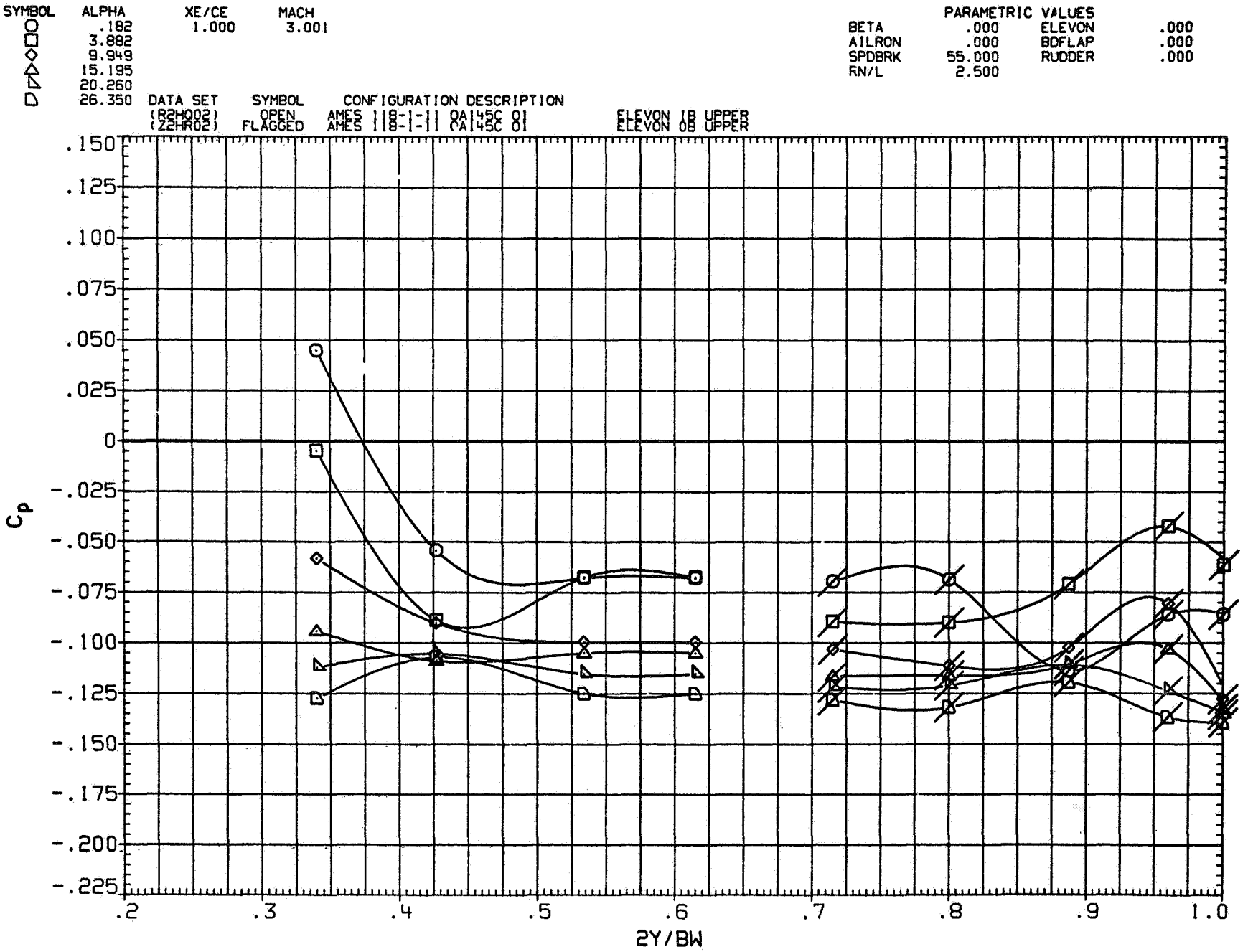


FIG.71 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

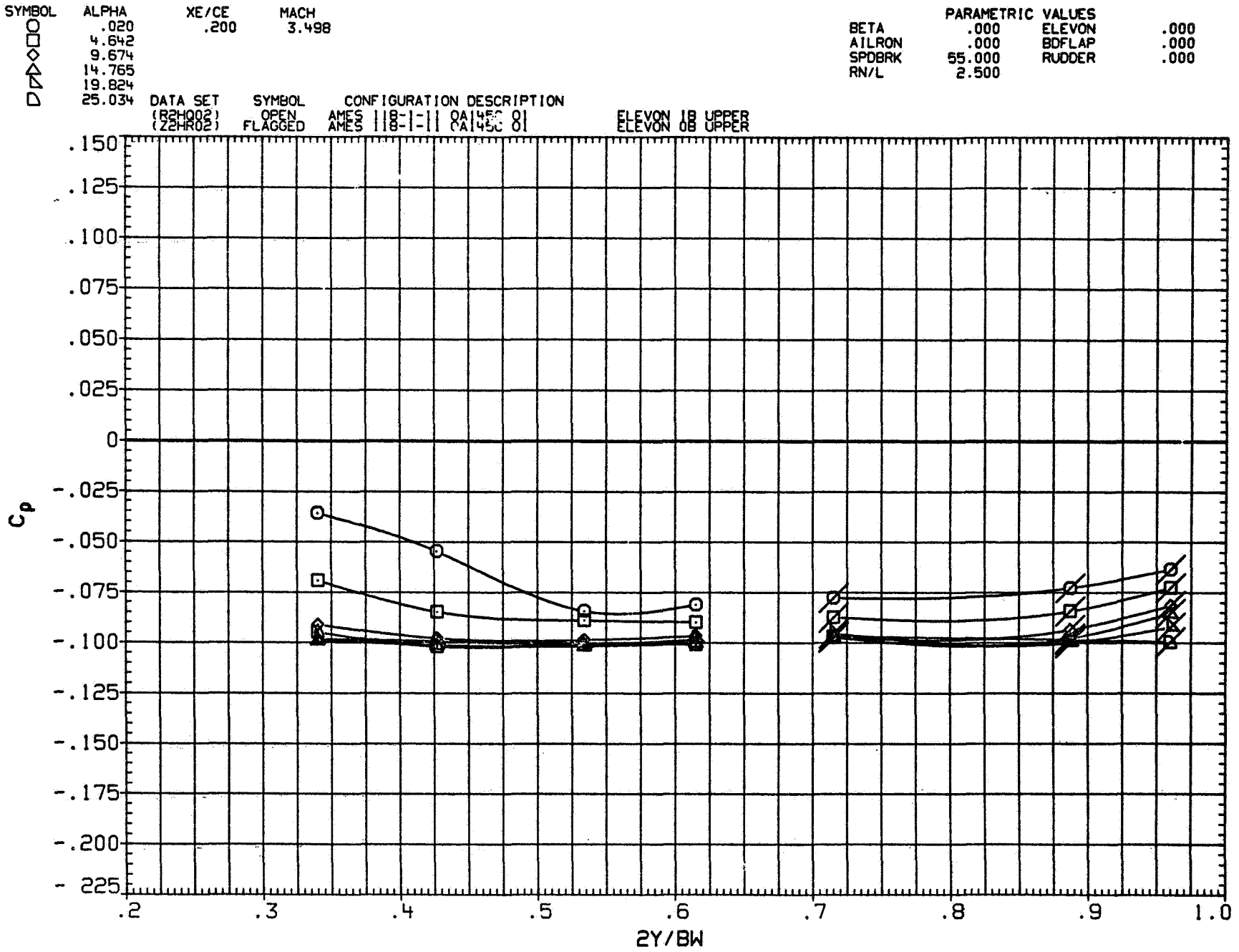


FIG.71 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

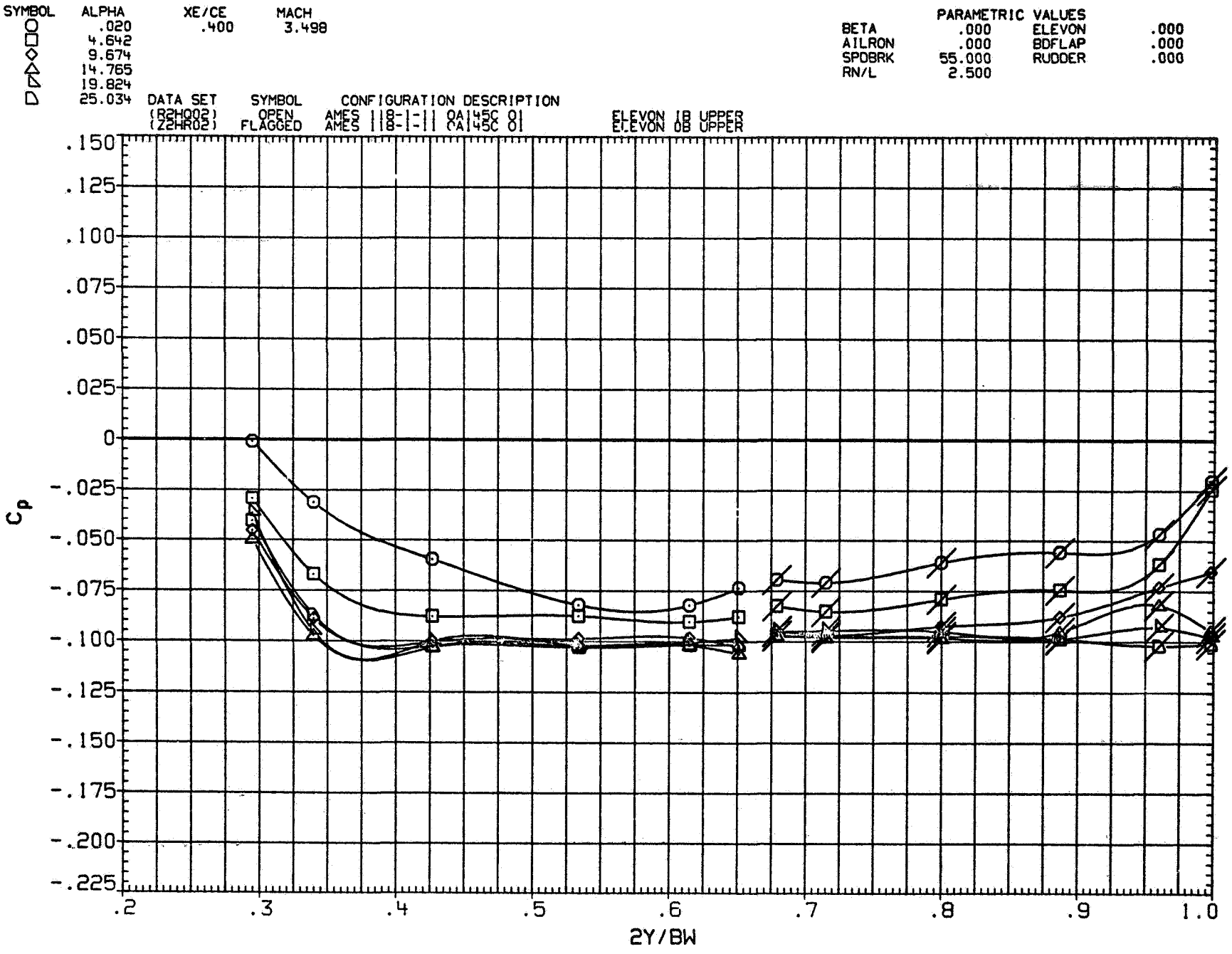


FIG.71 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

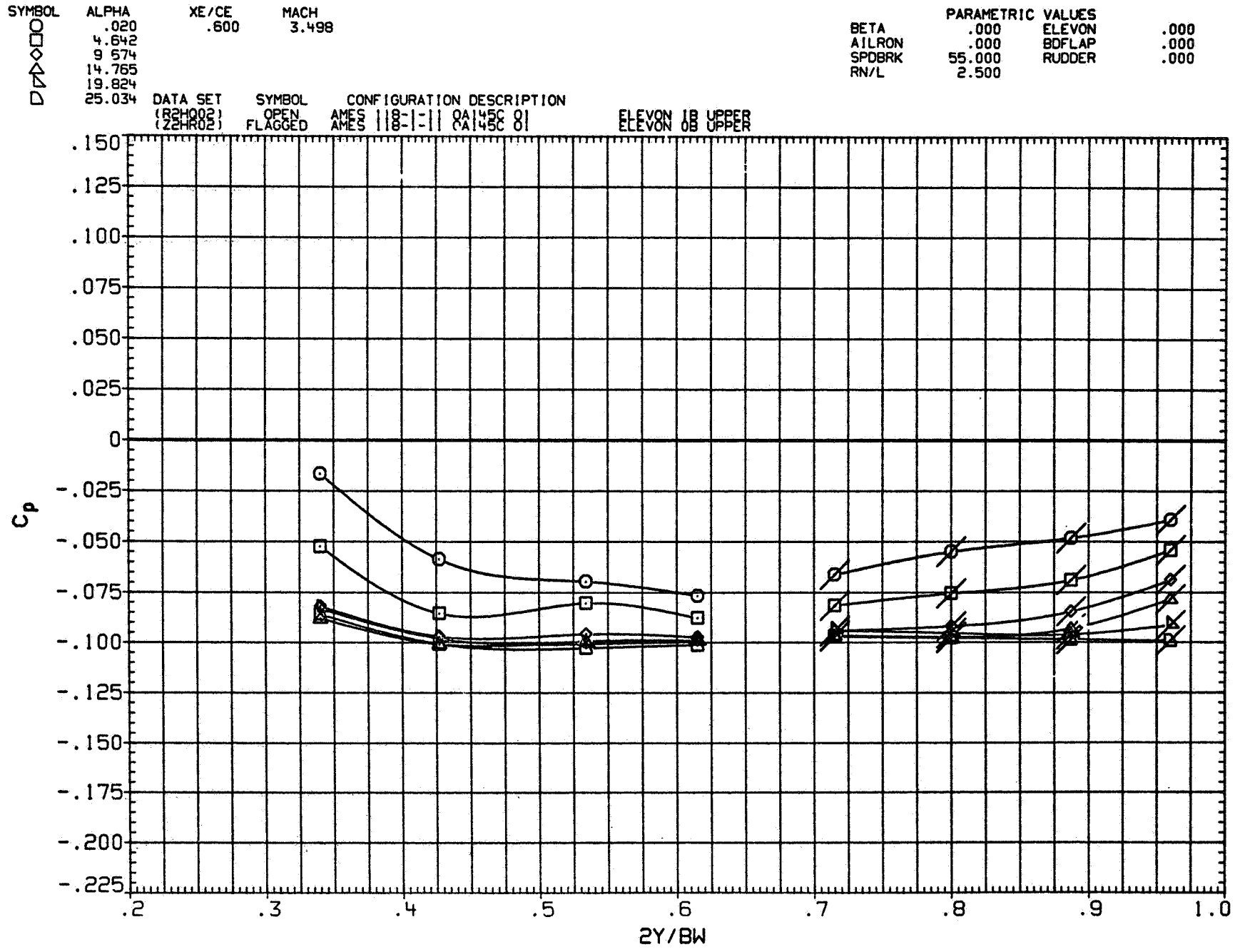


FIG.71 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

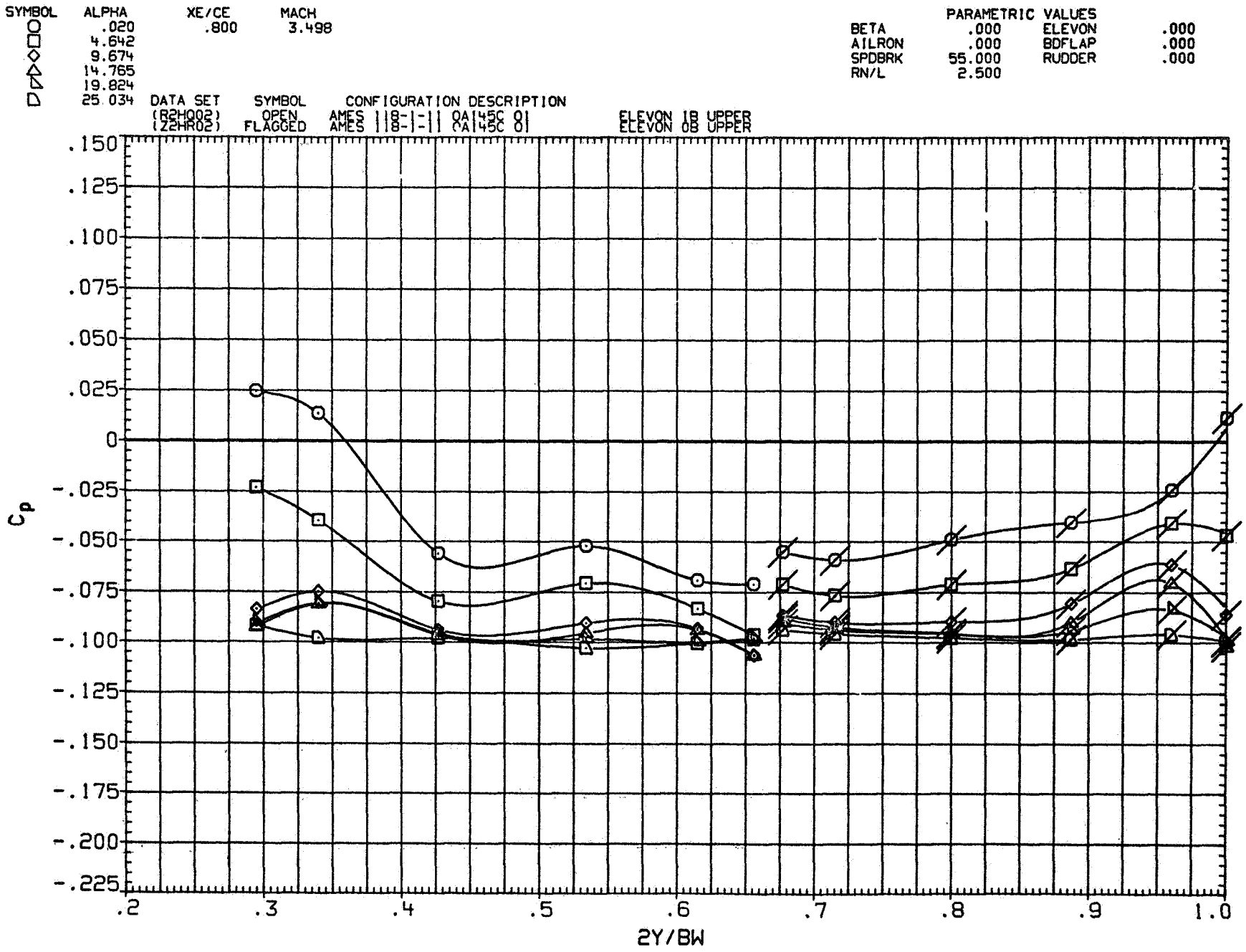


FIG.71 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

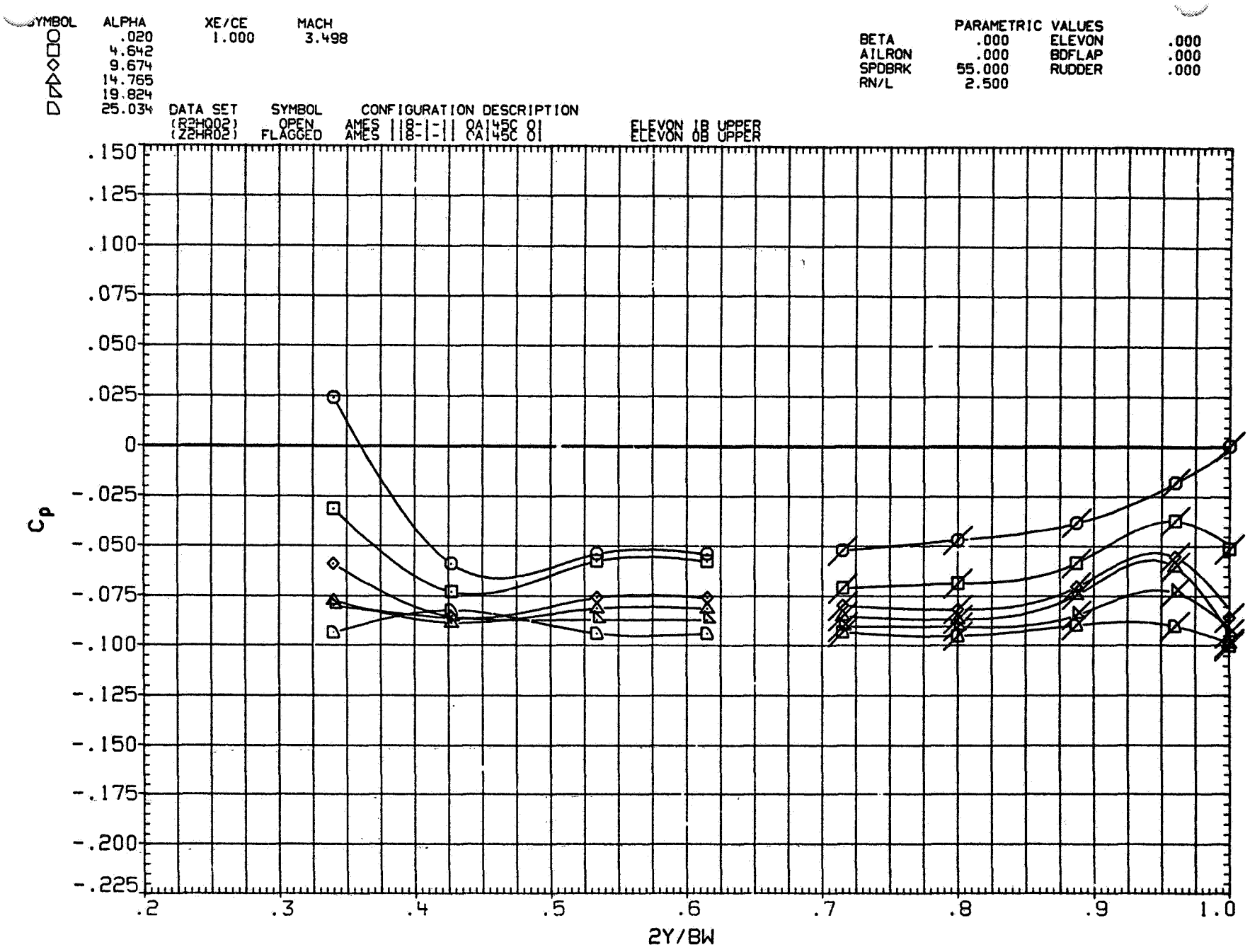


FIG.71 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

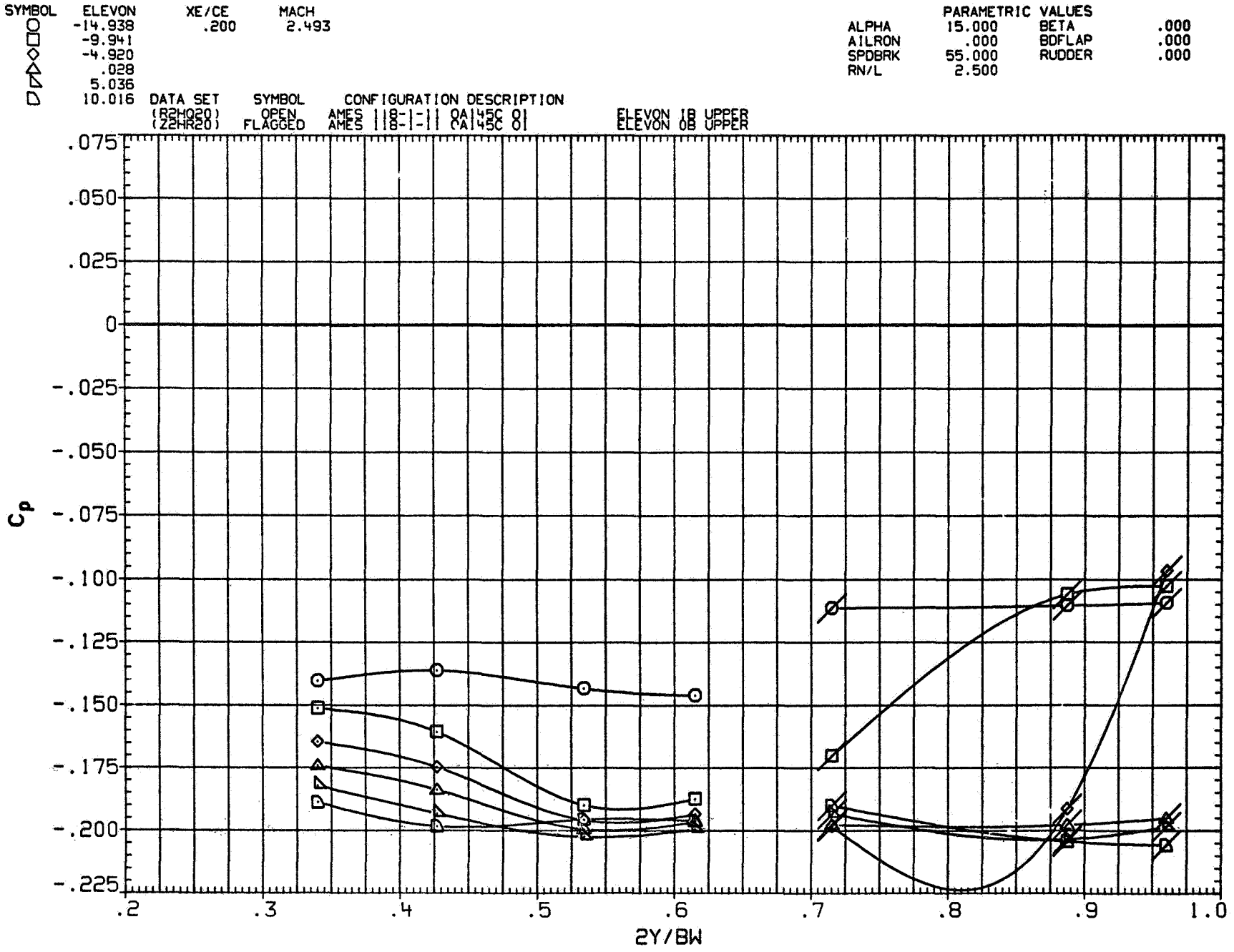


FIG.72 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

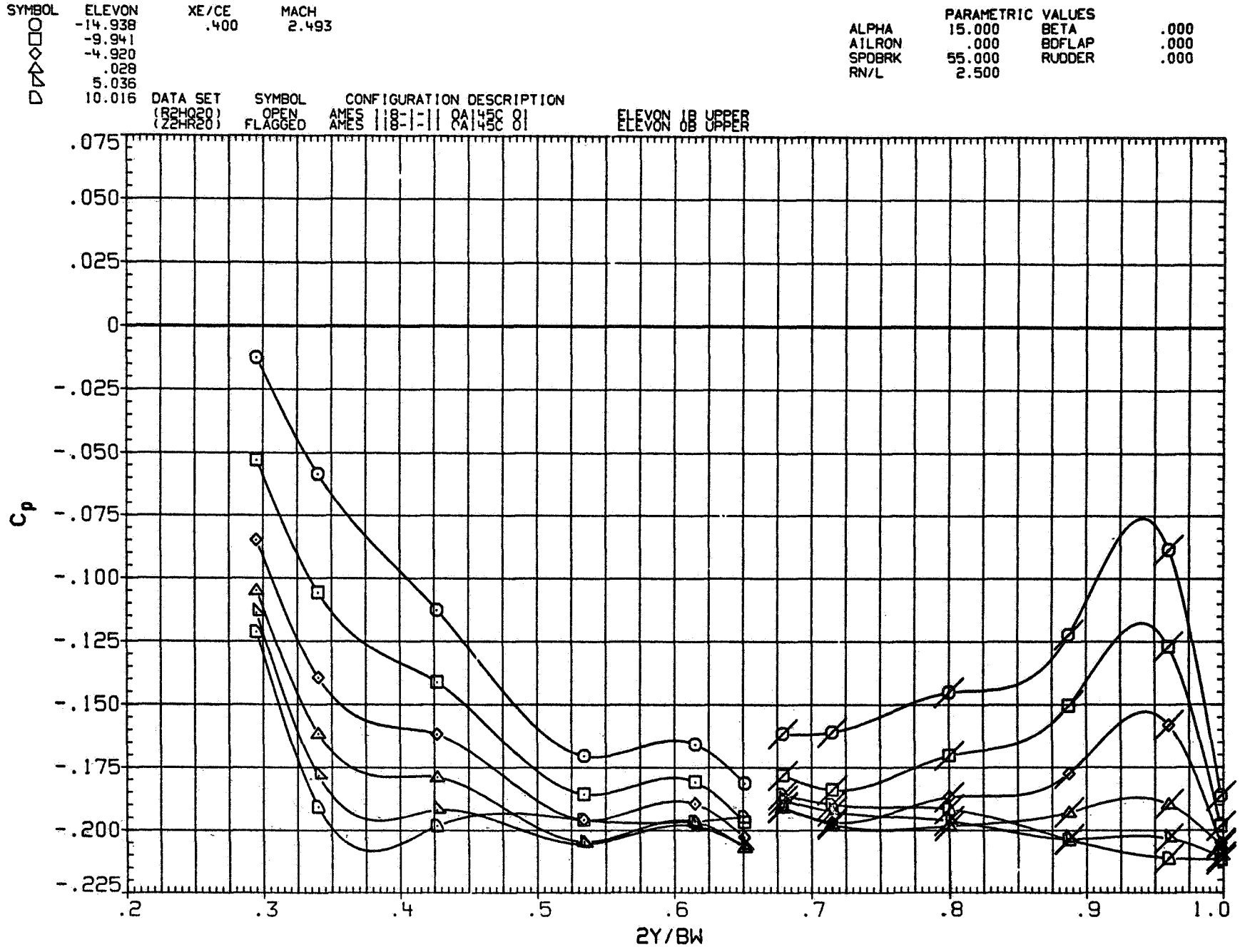


FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

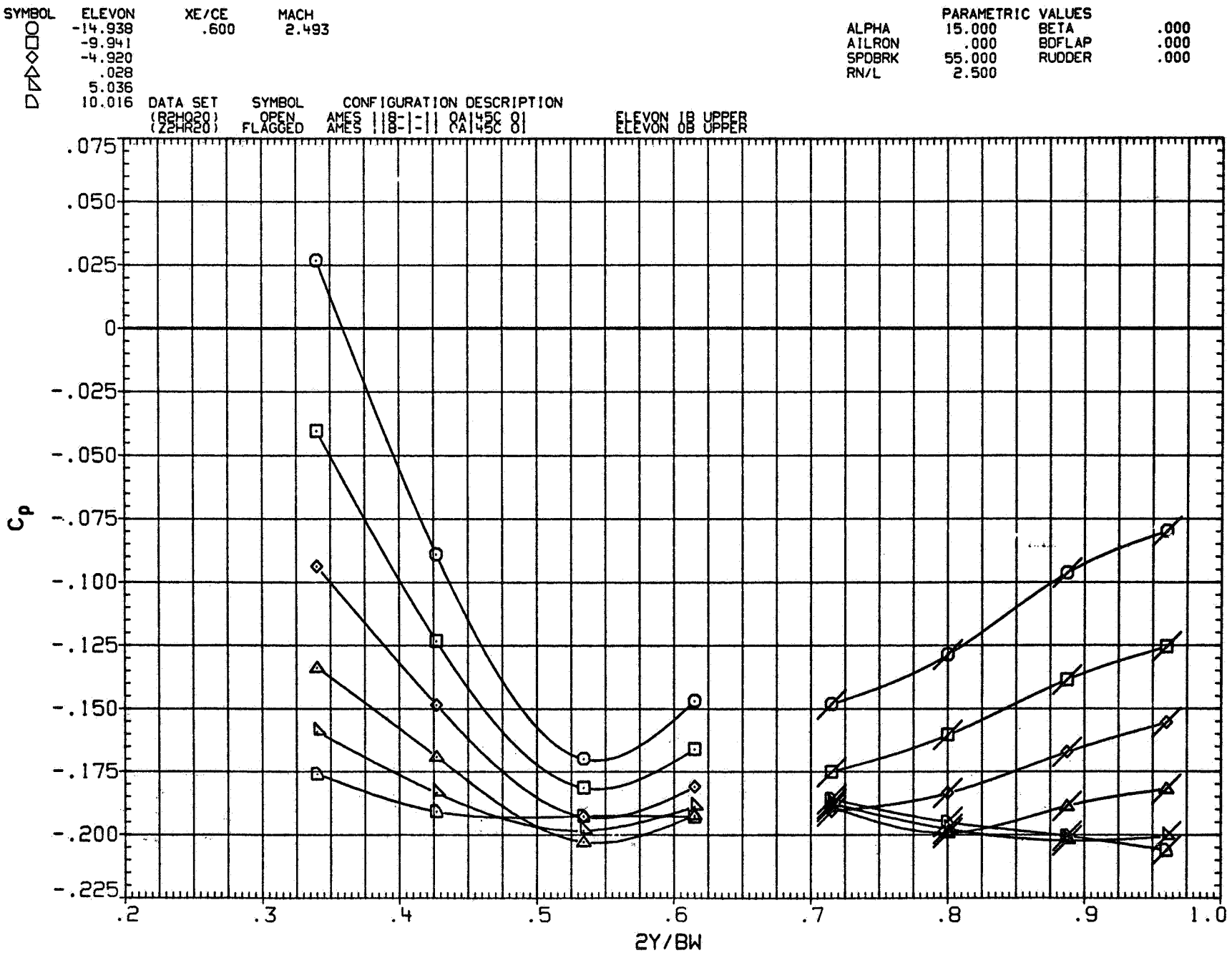


FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

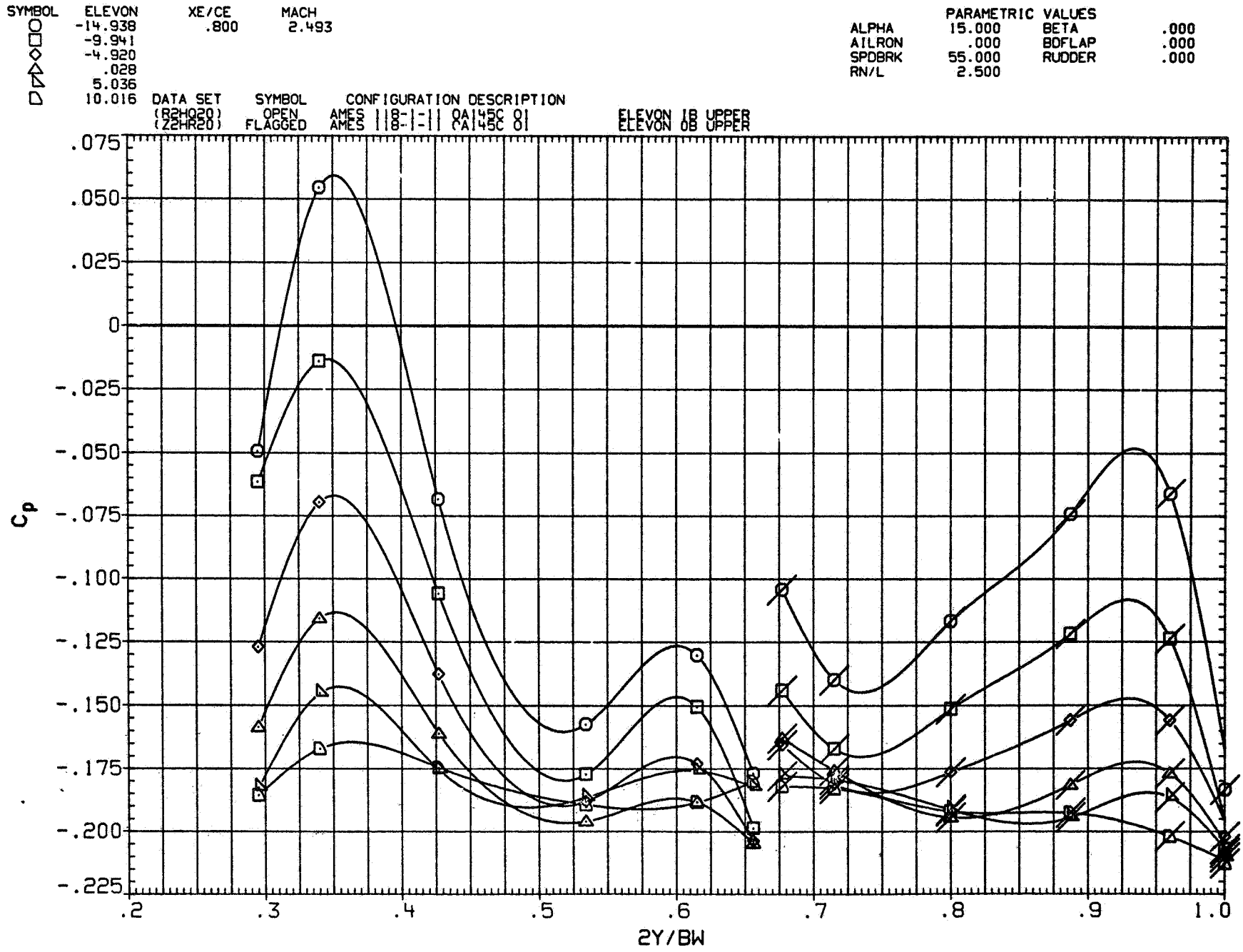


FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

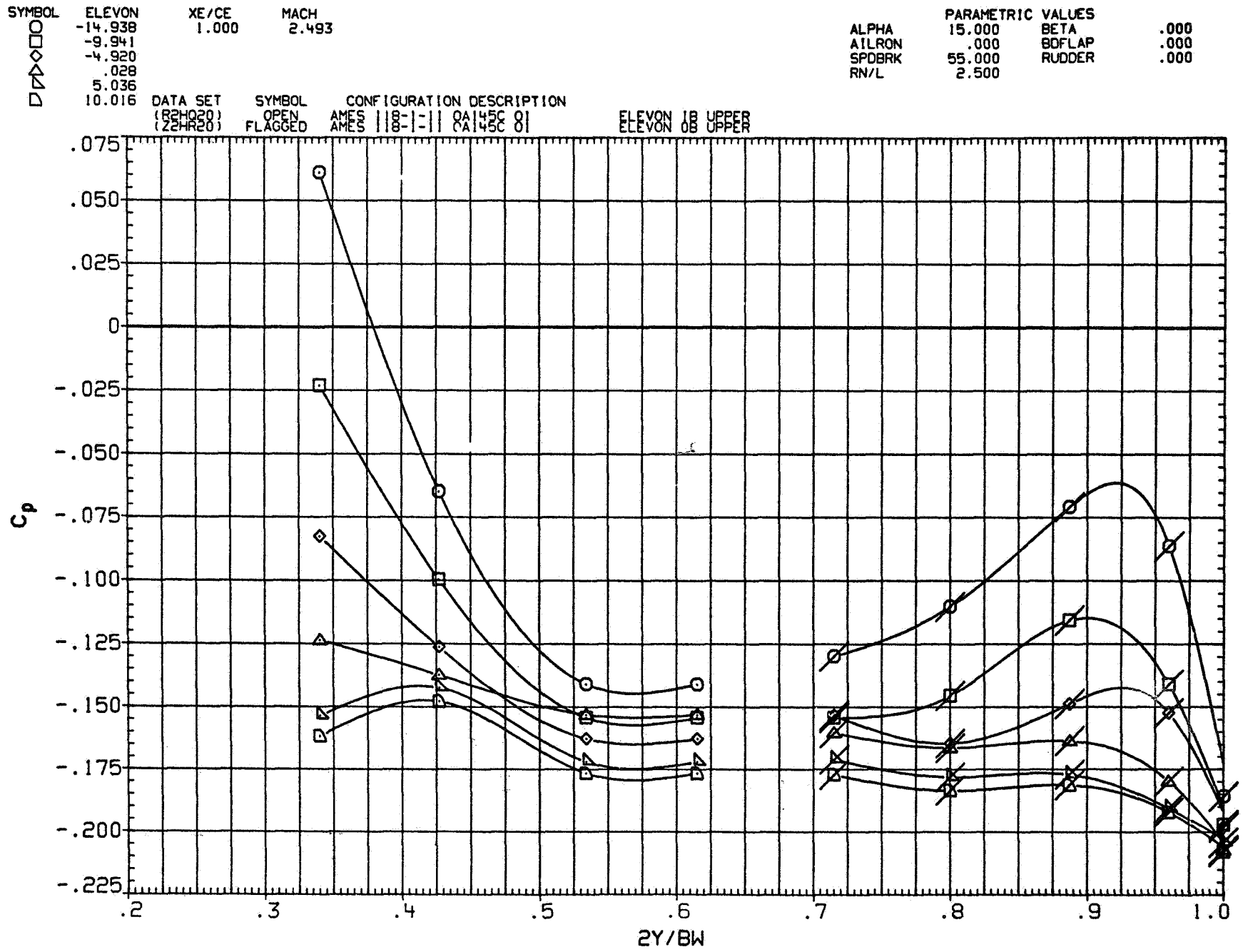


FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

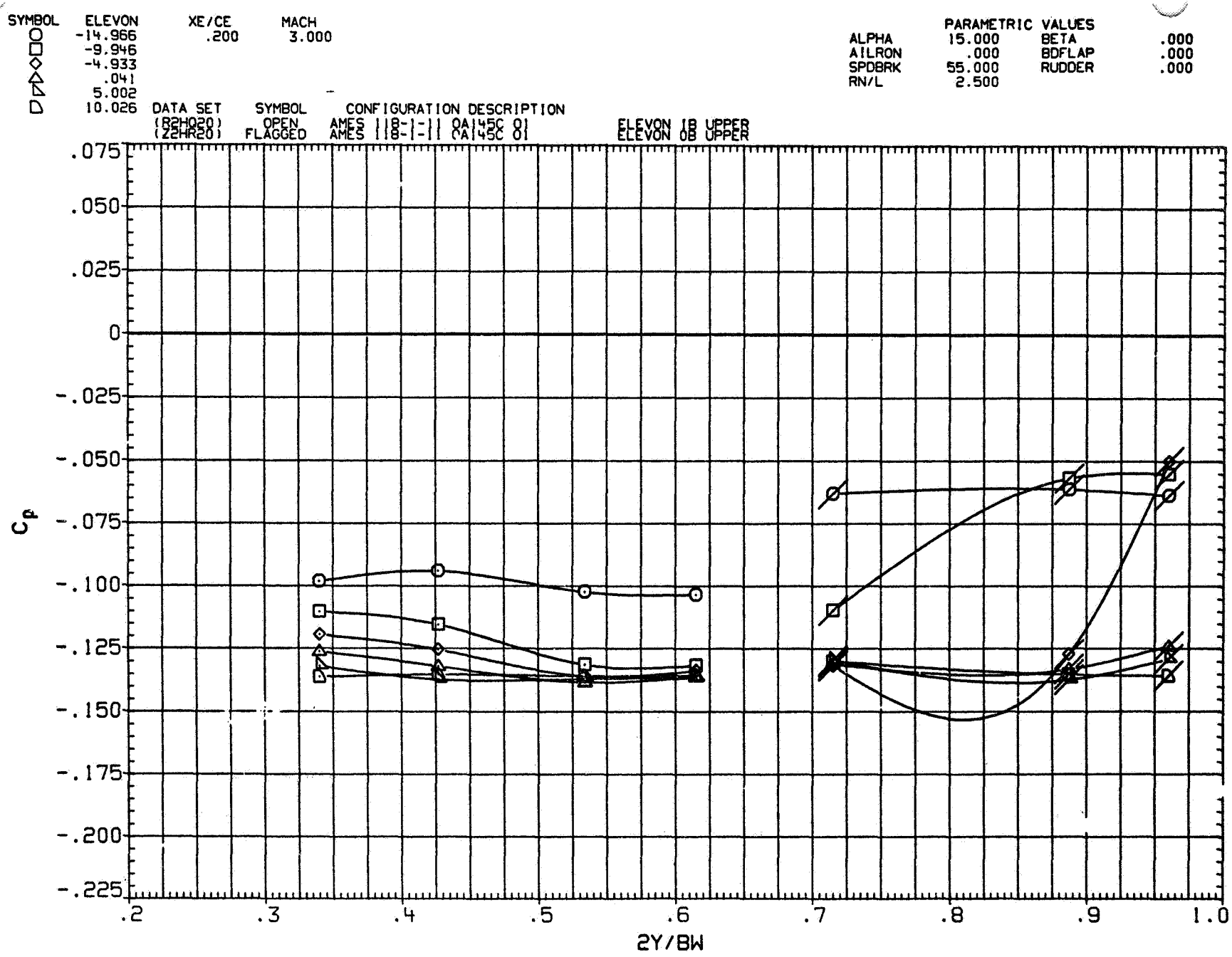


FIG.72 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

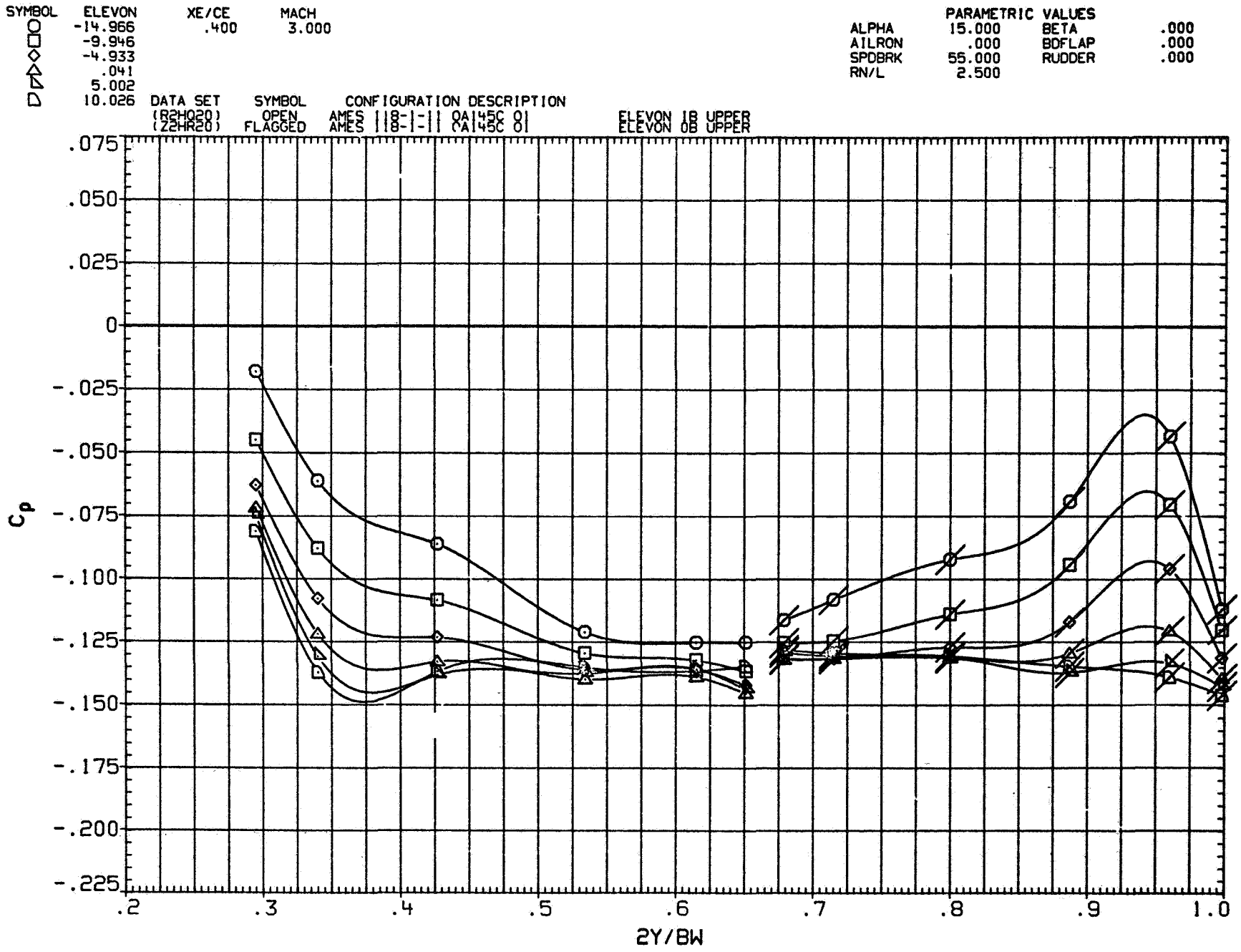


FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

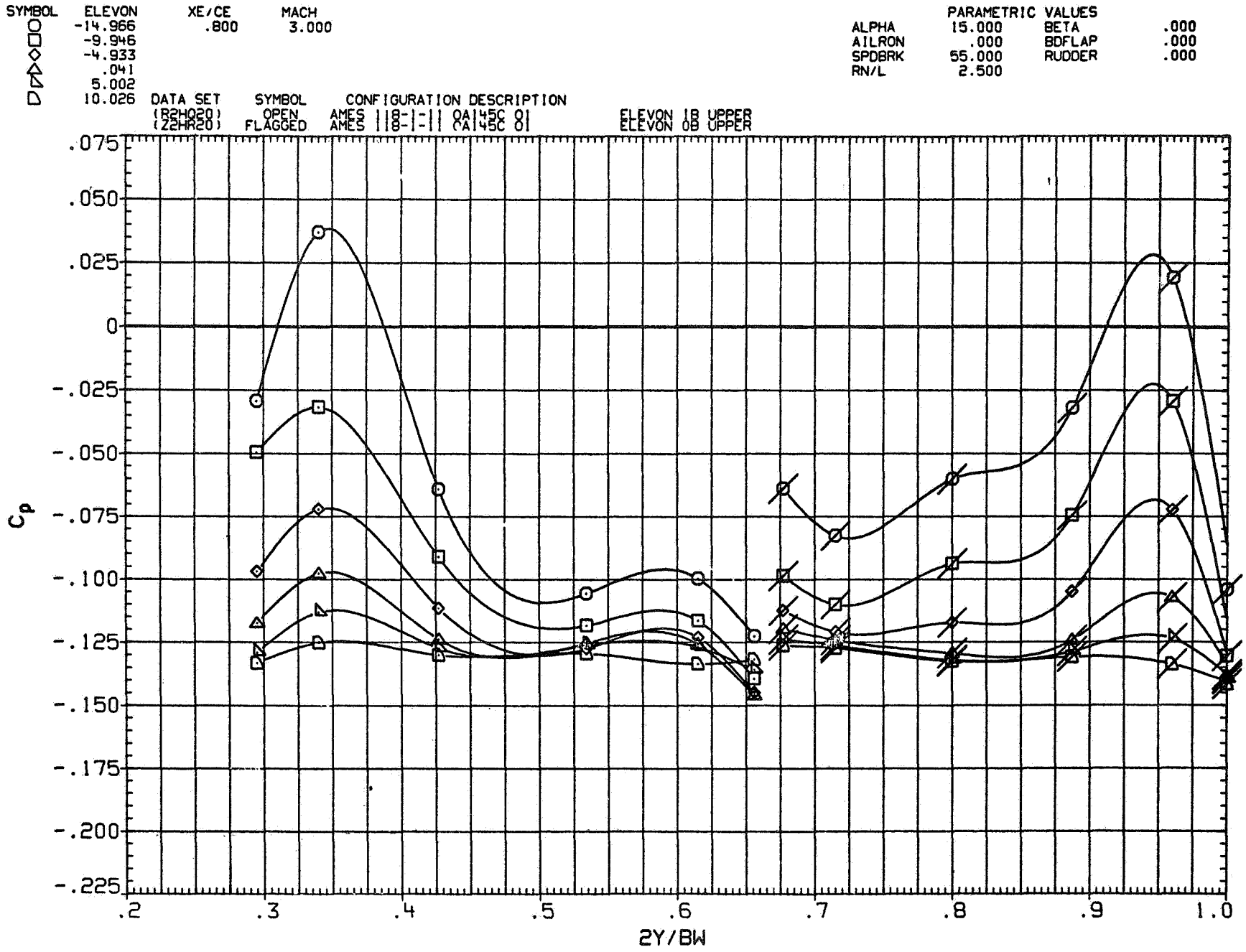


FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

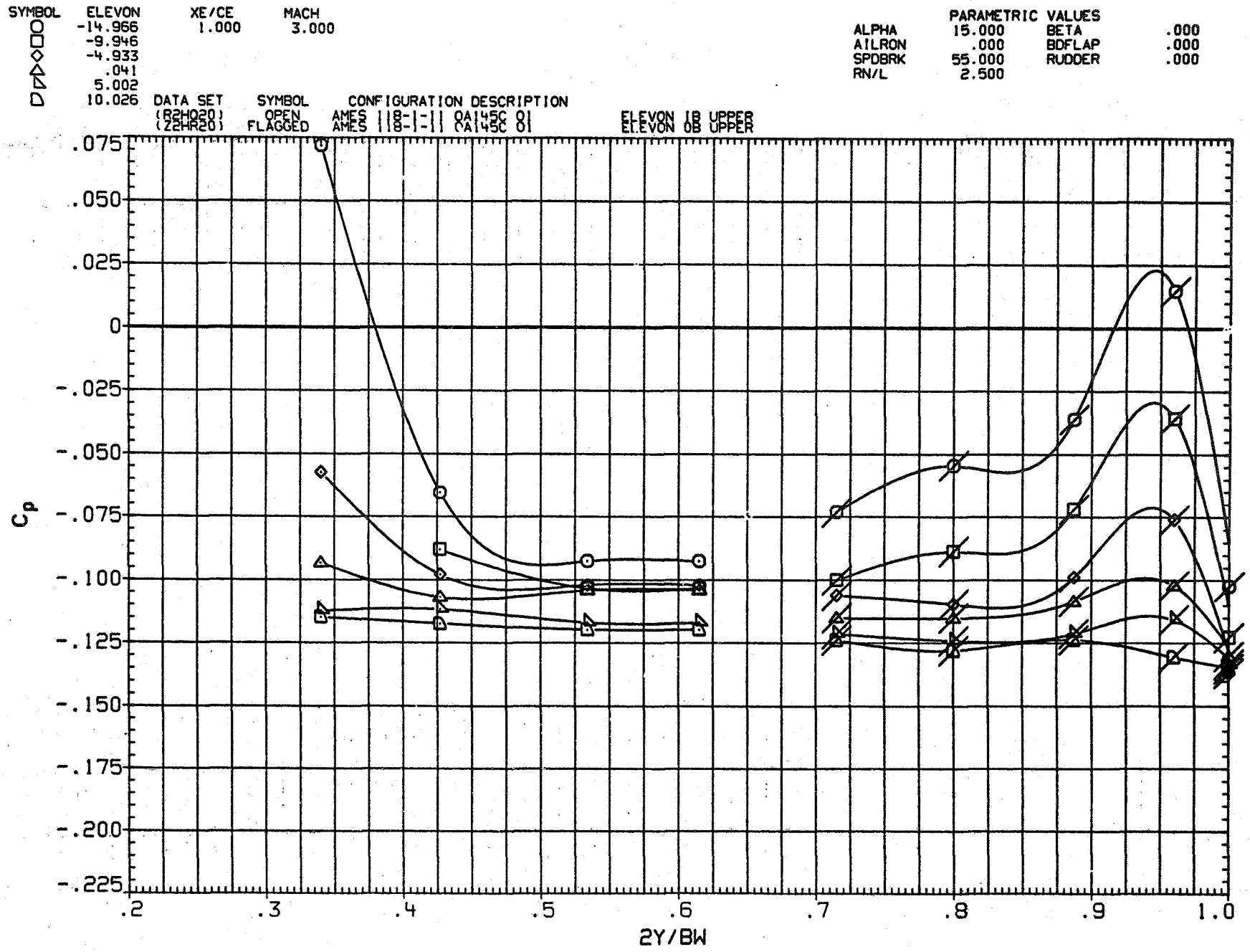


FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

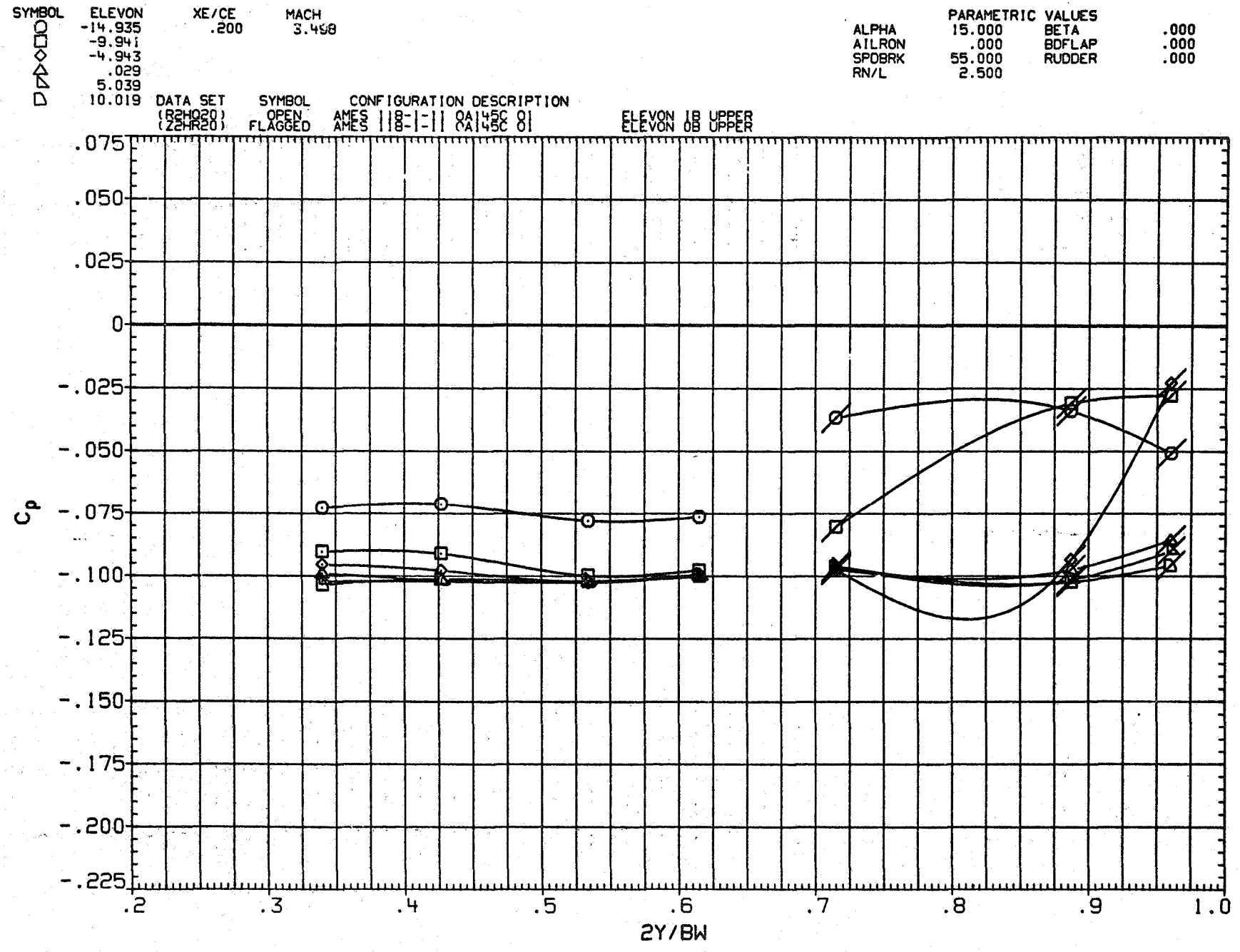


FIG.72 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

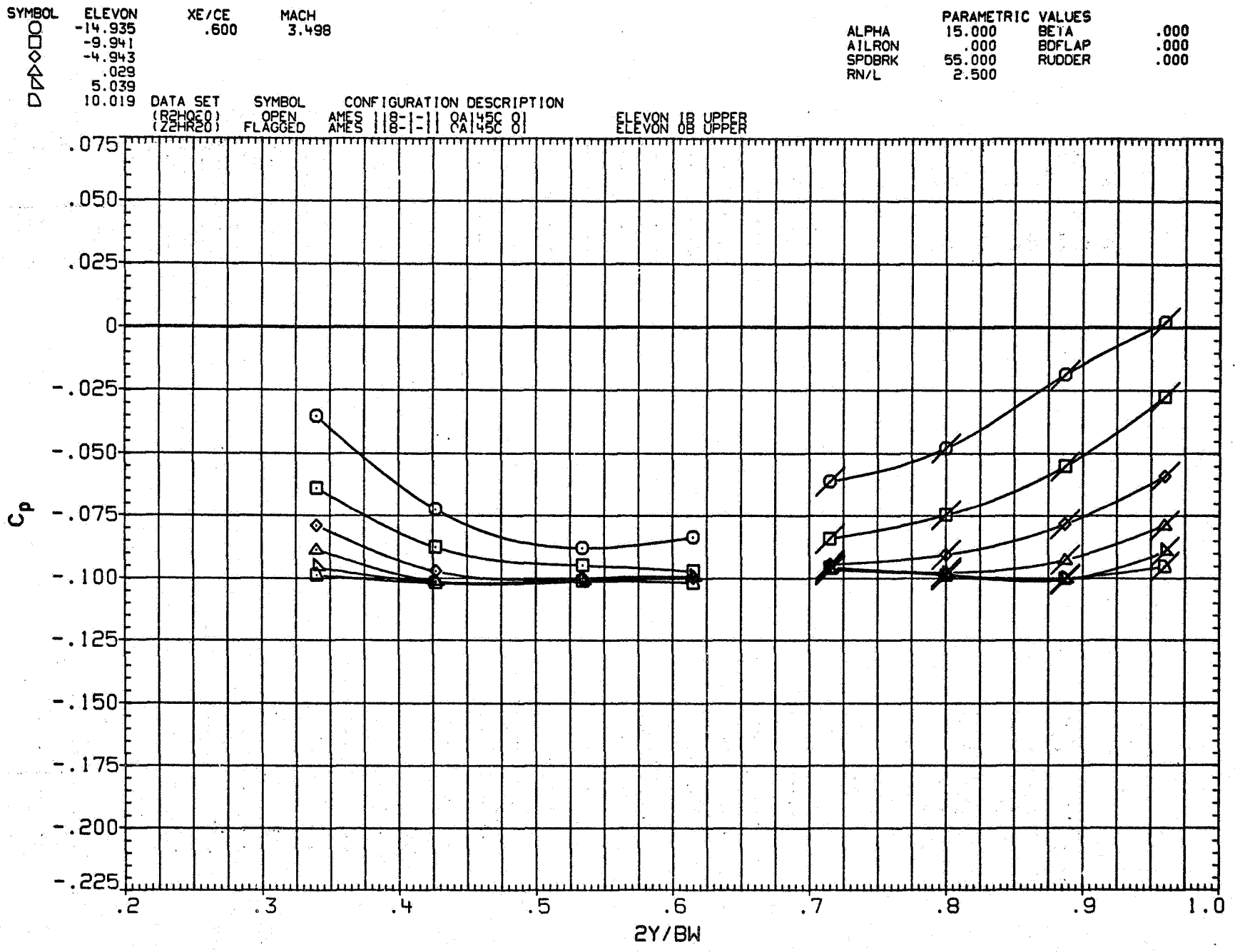


FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

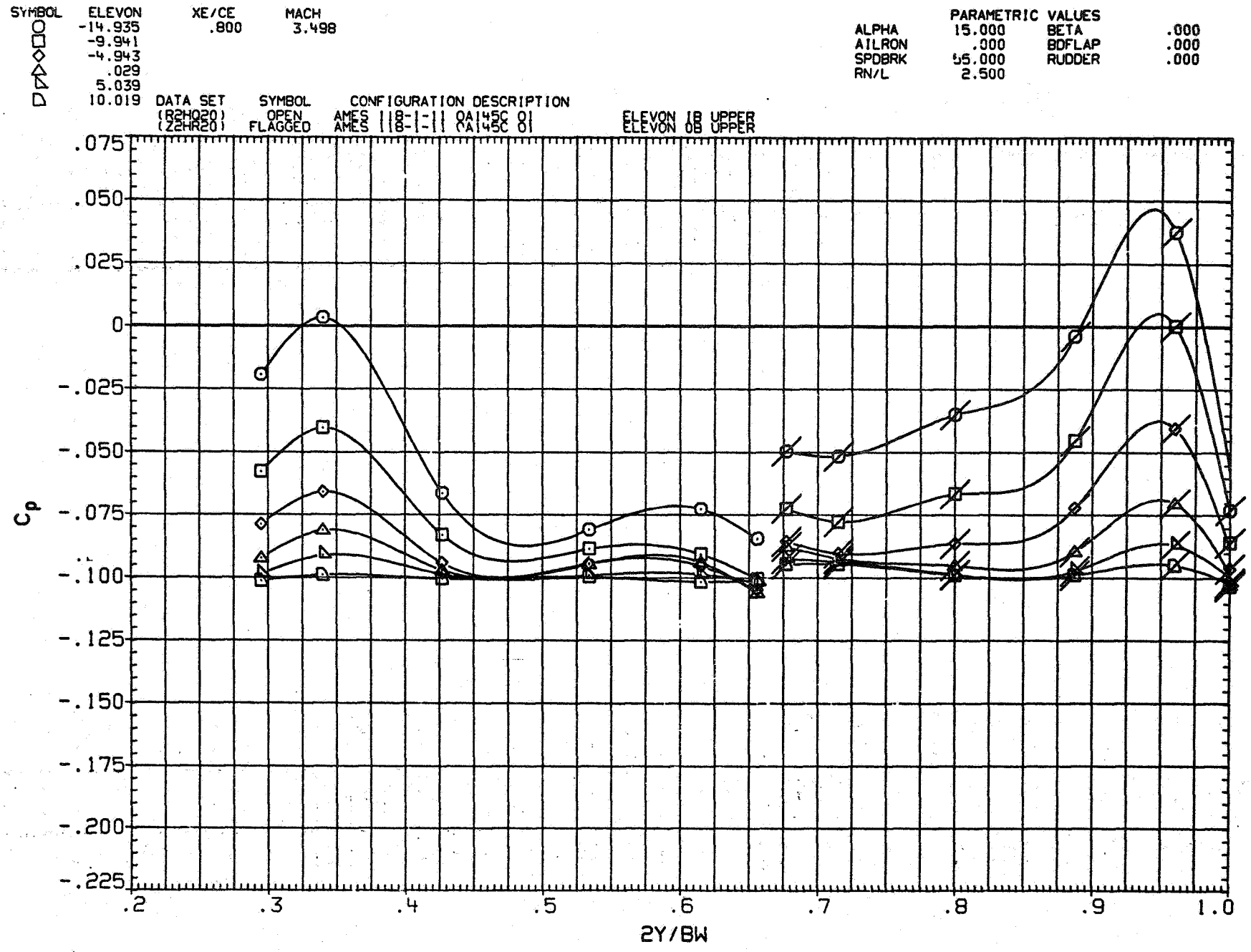


FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

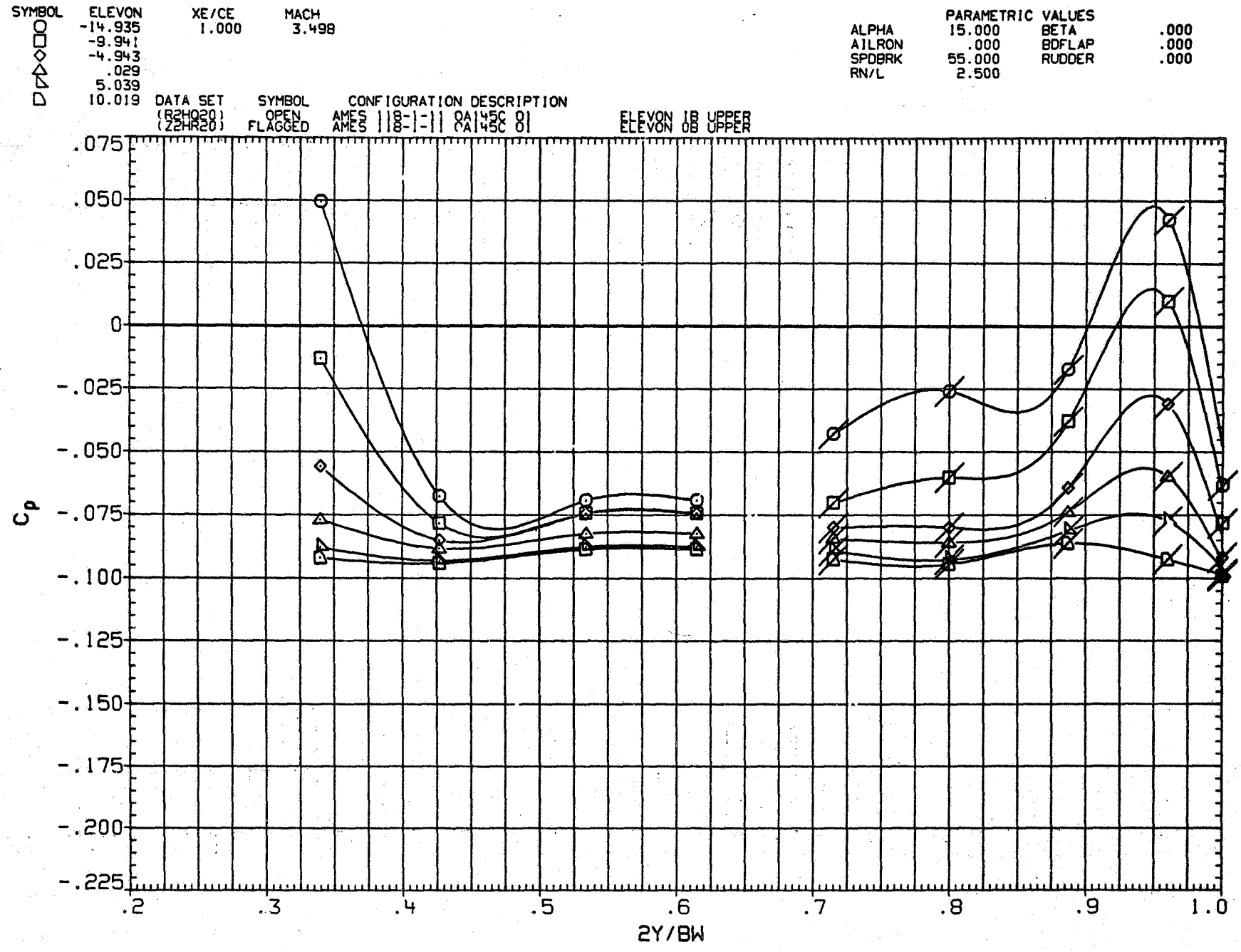


FIG.72 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

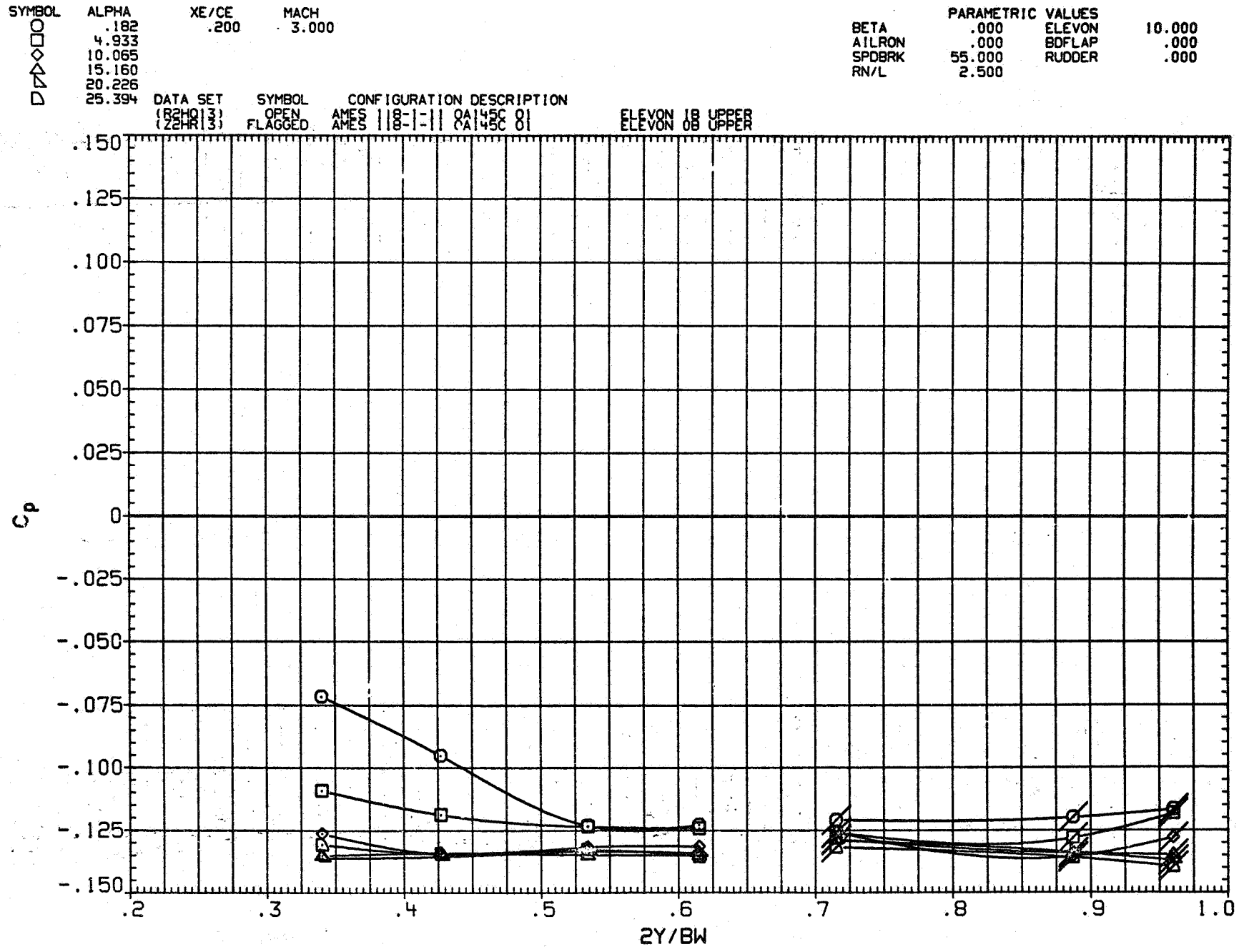


FIG.73 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

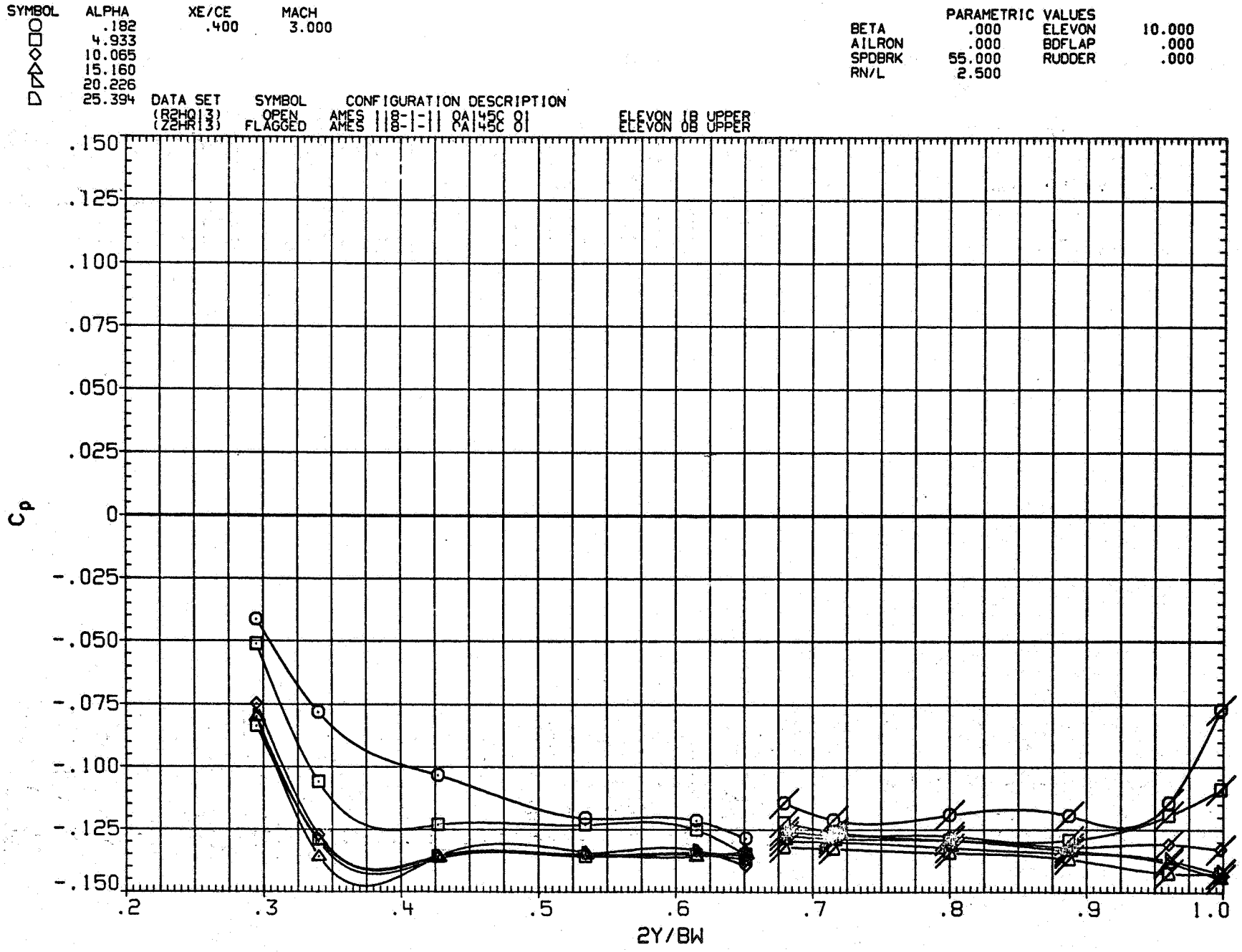


FIG.73 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

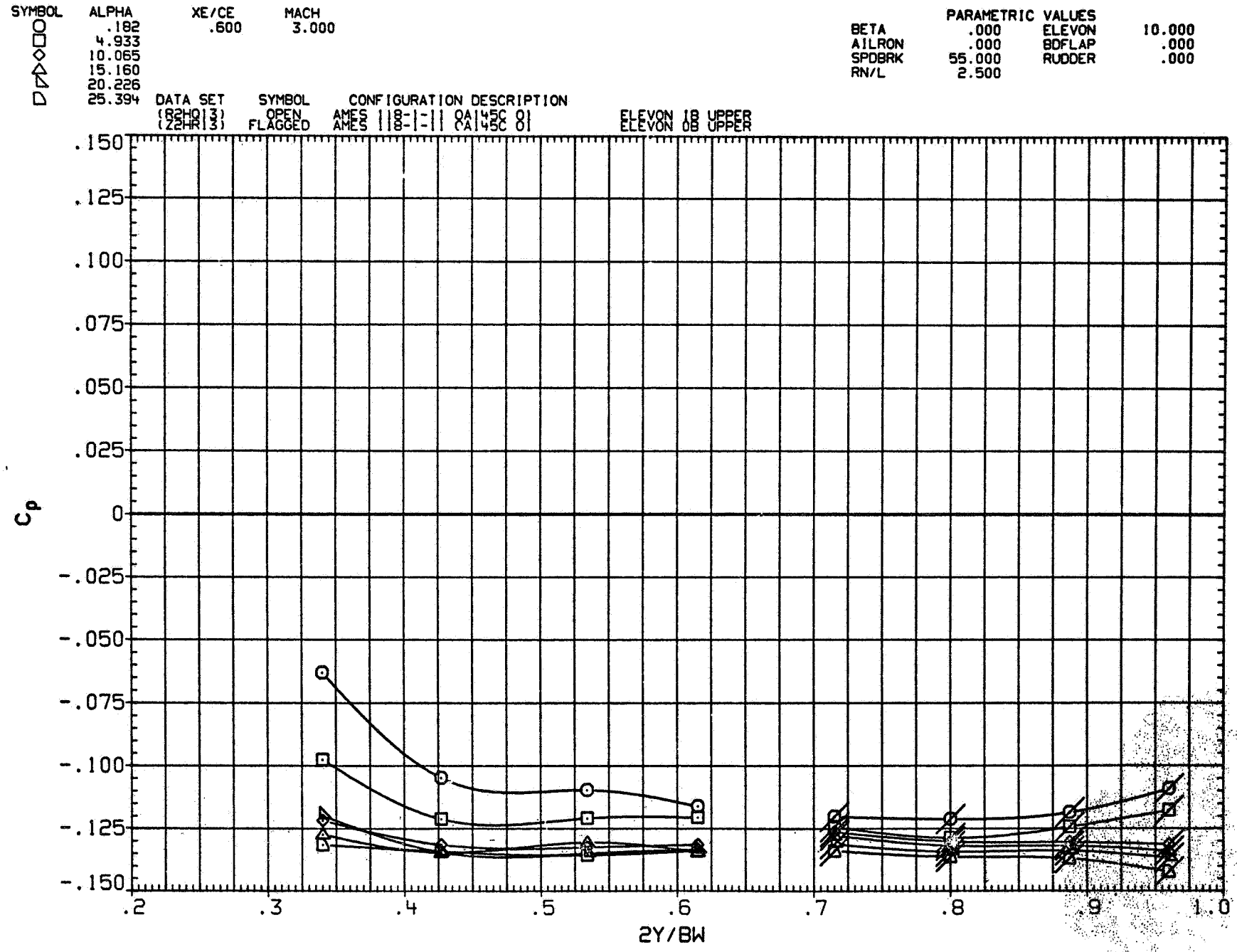


FIG.73 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

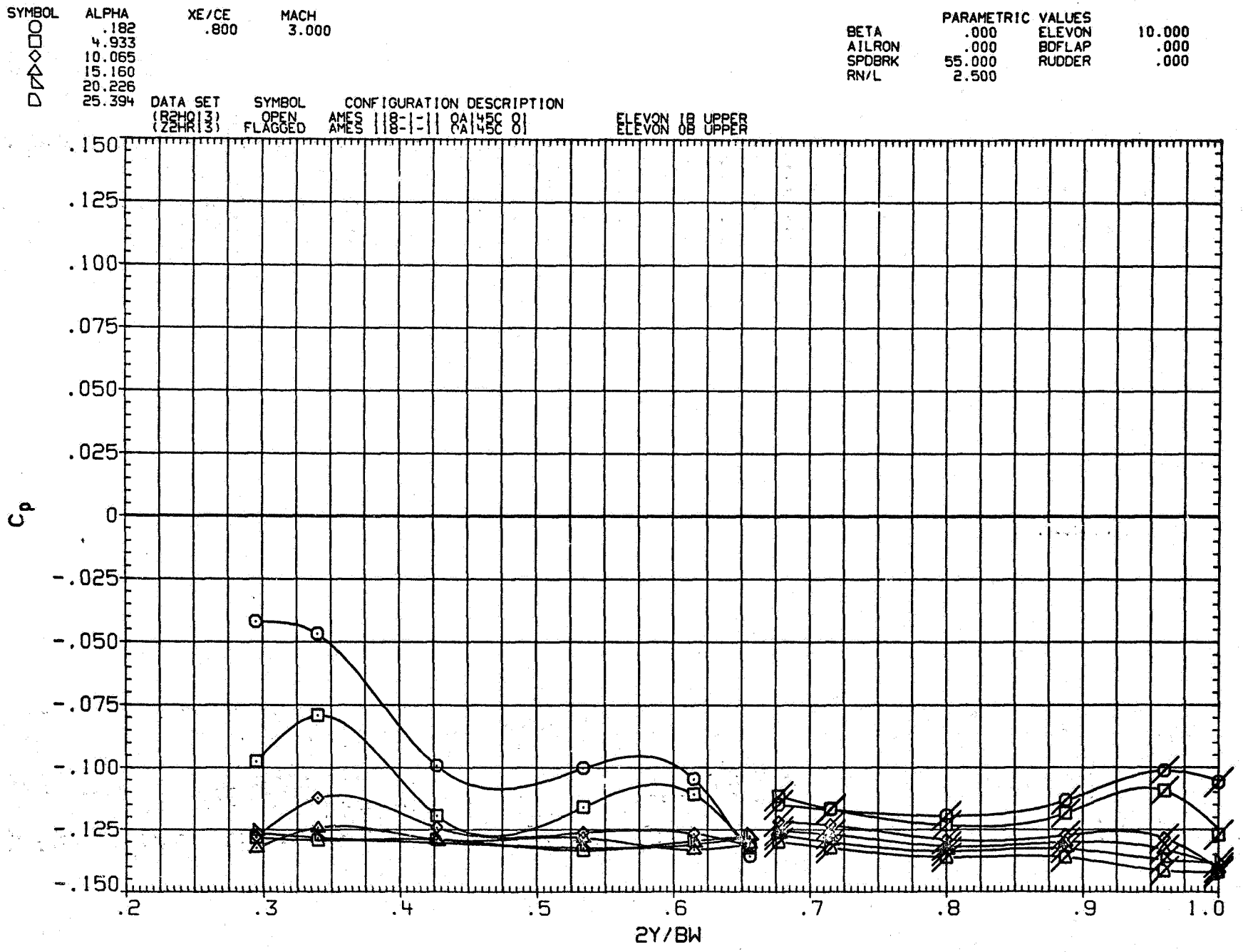


FIG.73 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

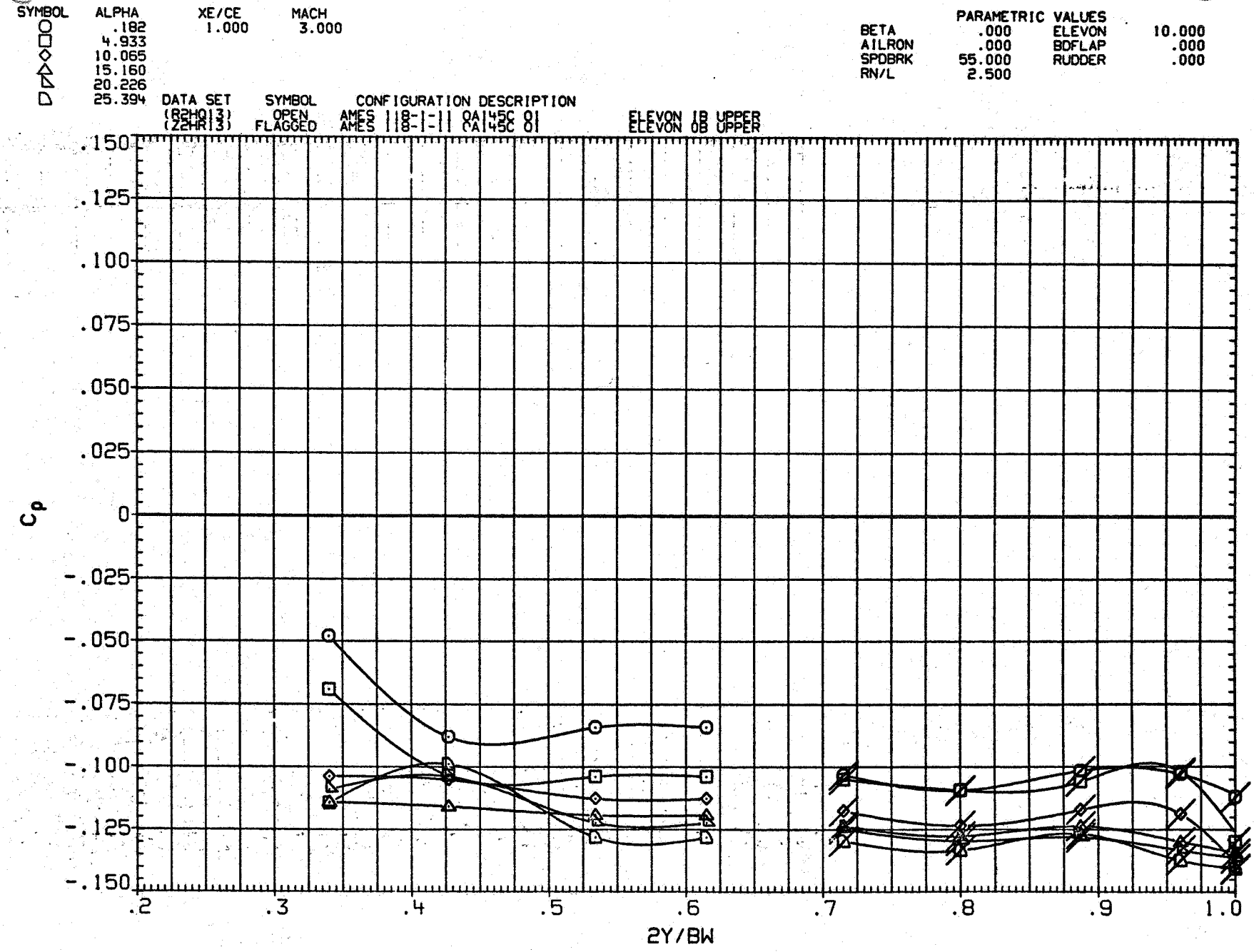


FIG.73 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

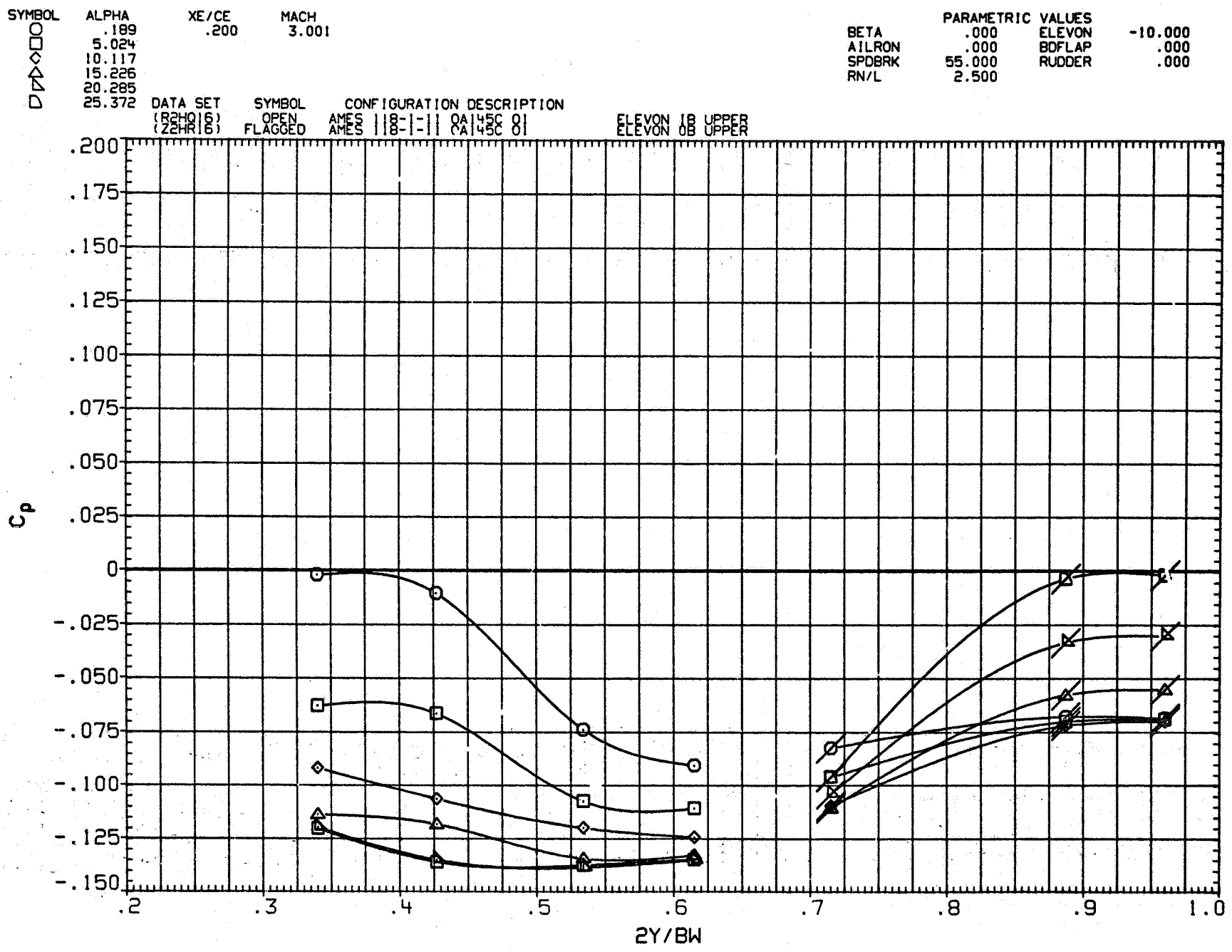


FIG.74 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

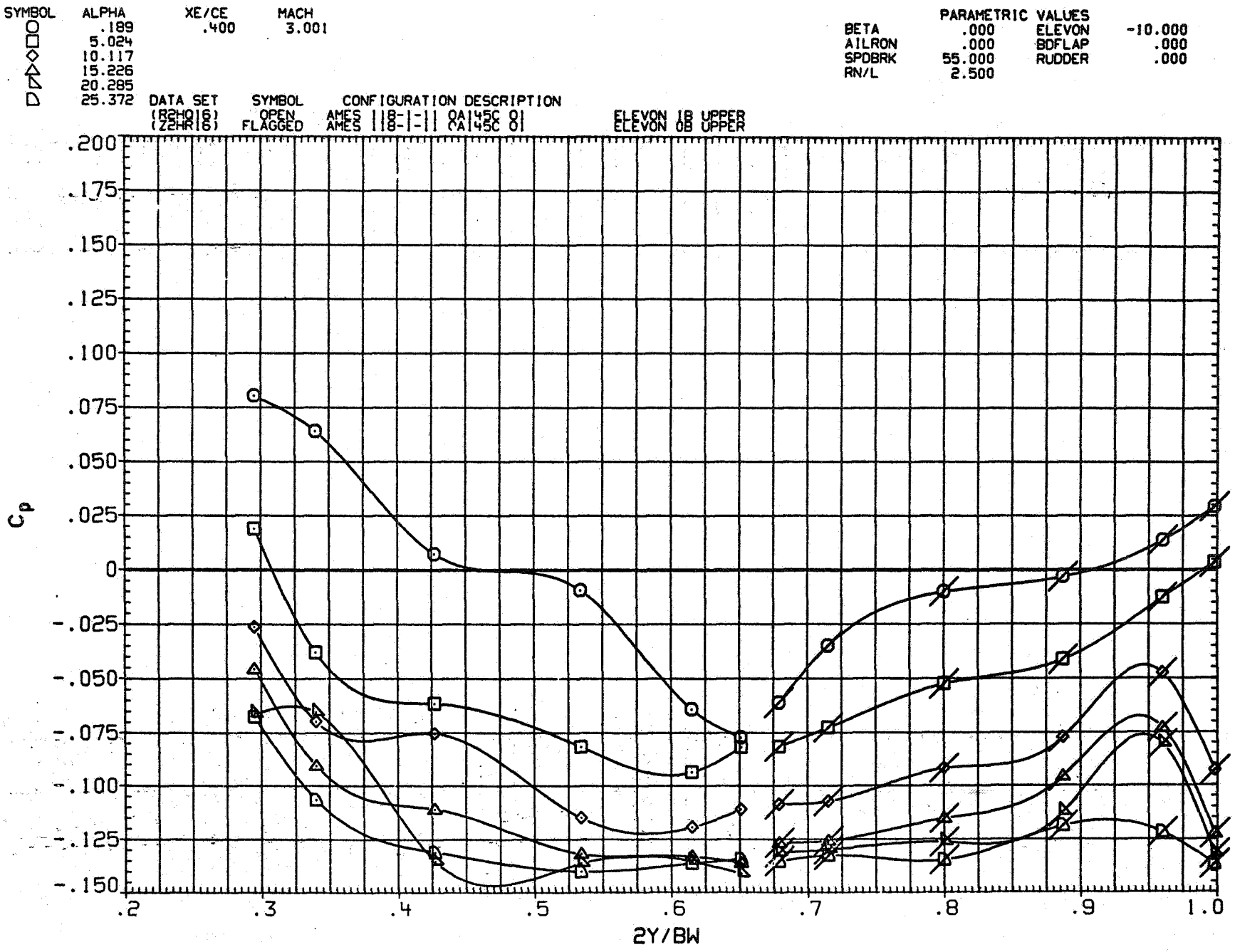


FIG.74 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

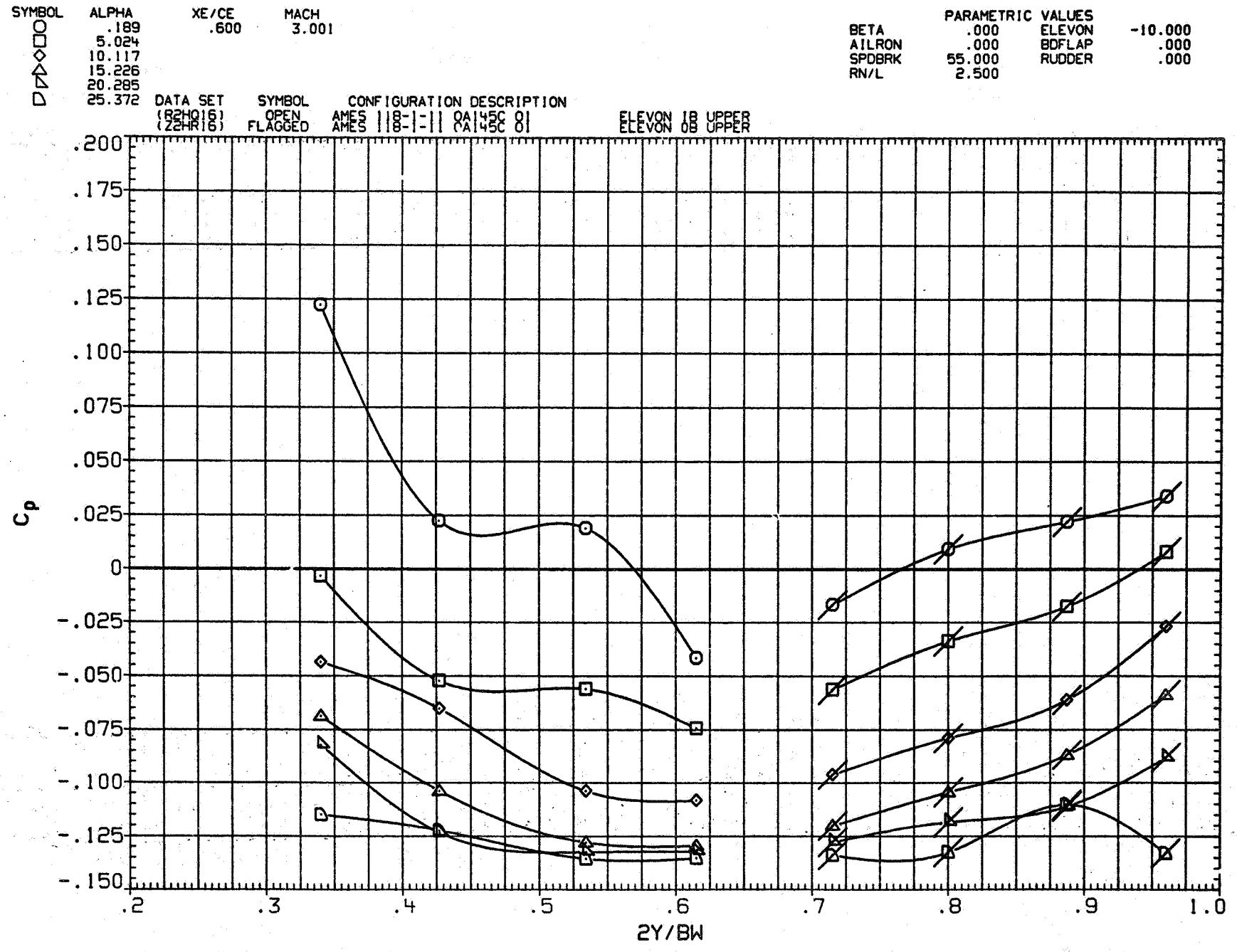


FIG.74 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

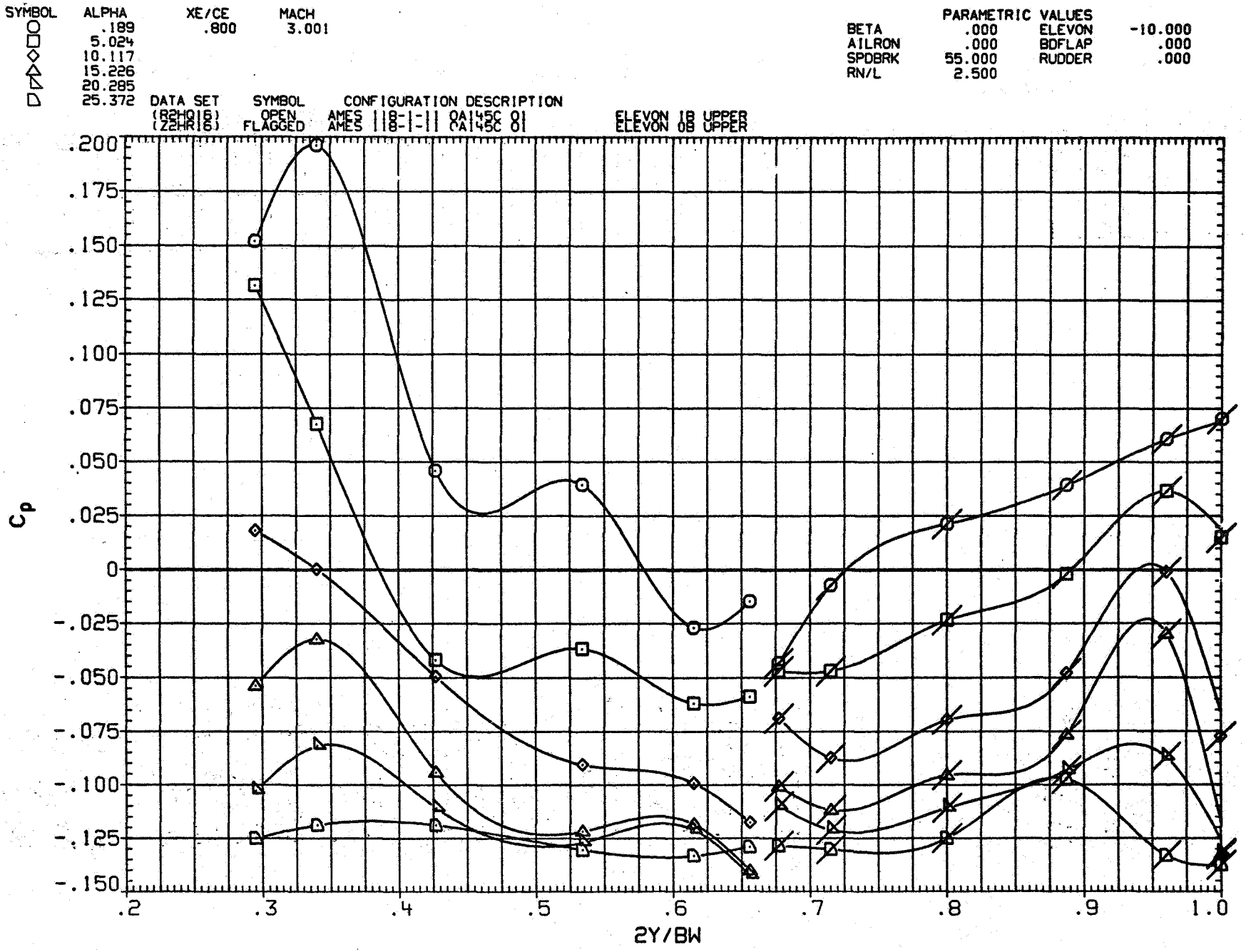


FIG.74 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

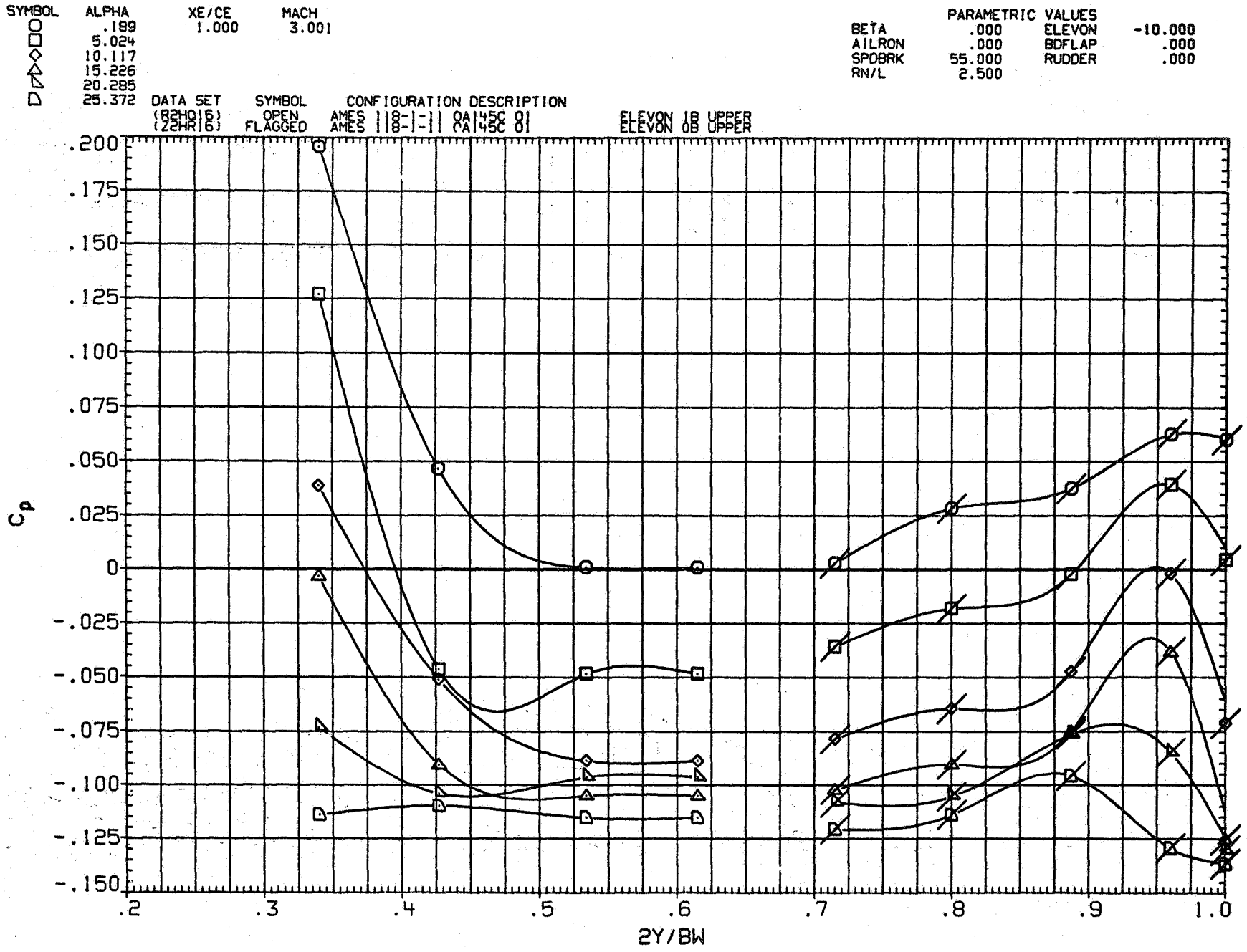


FIG.74 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

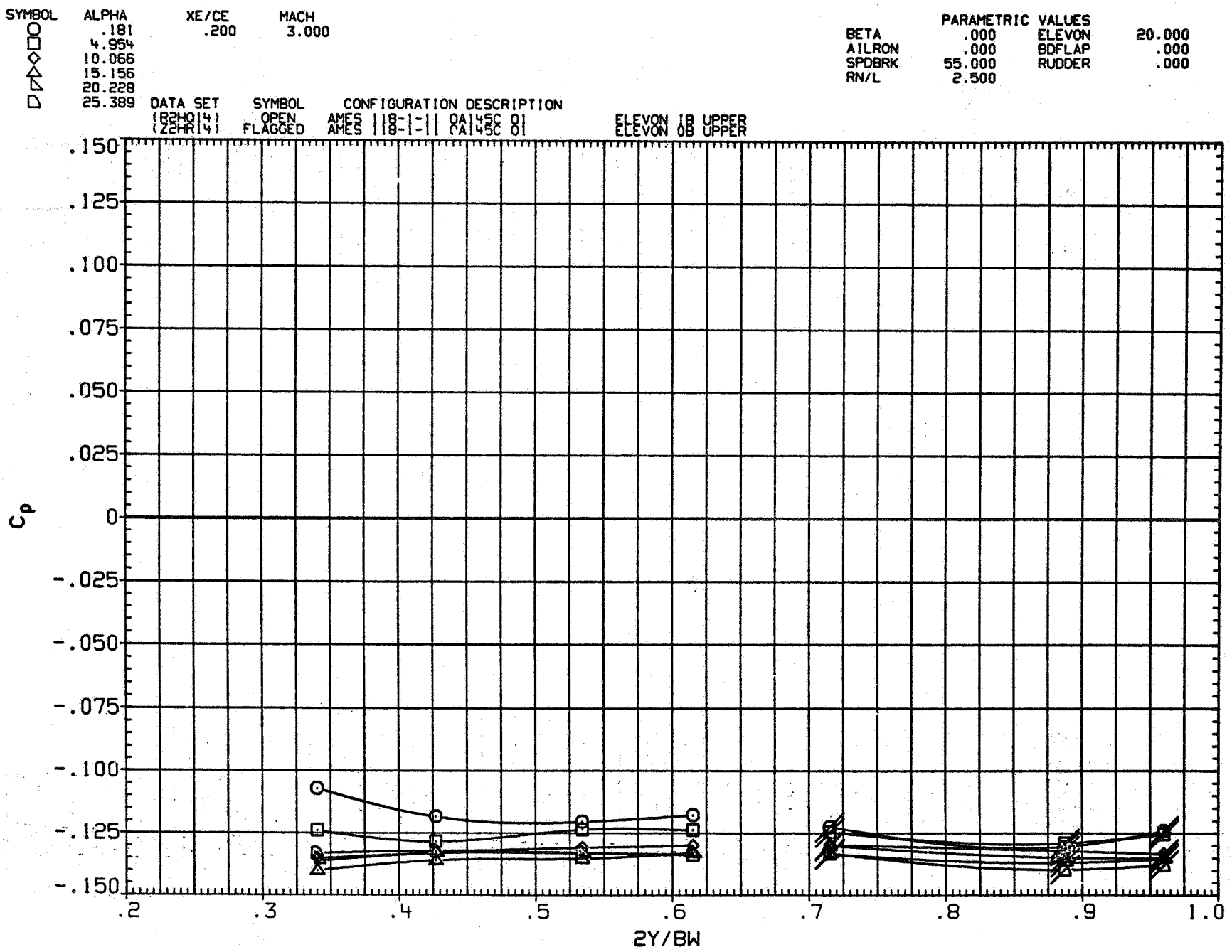


FIG.75 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

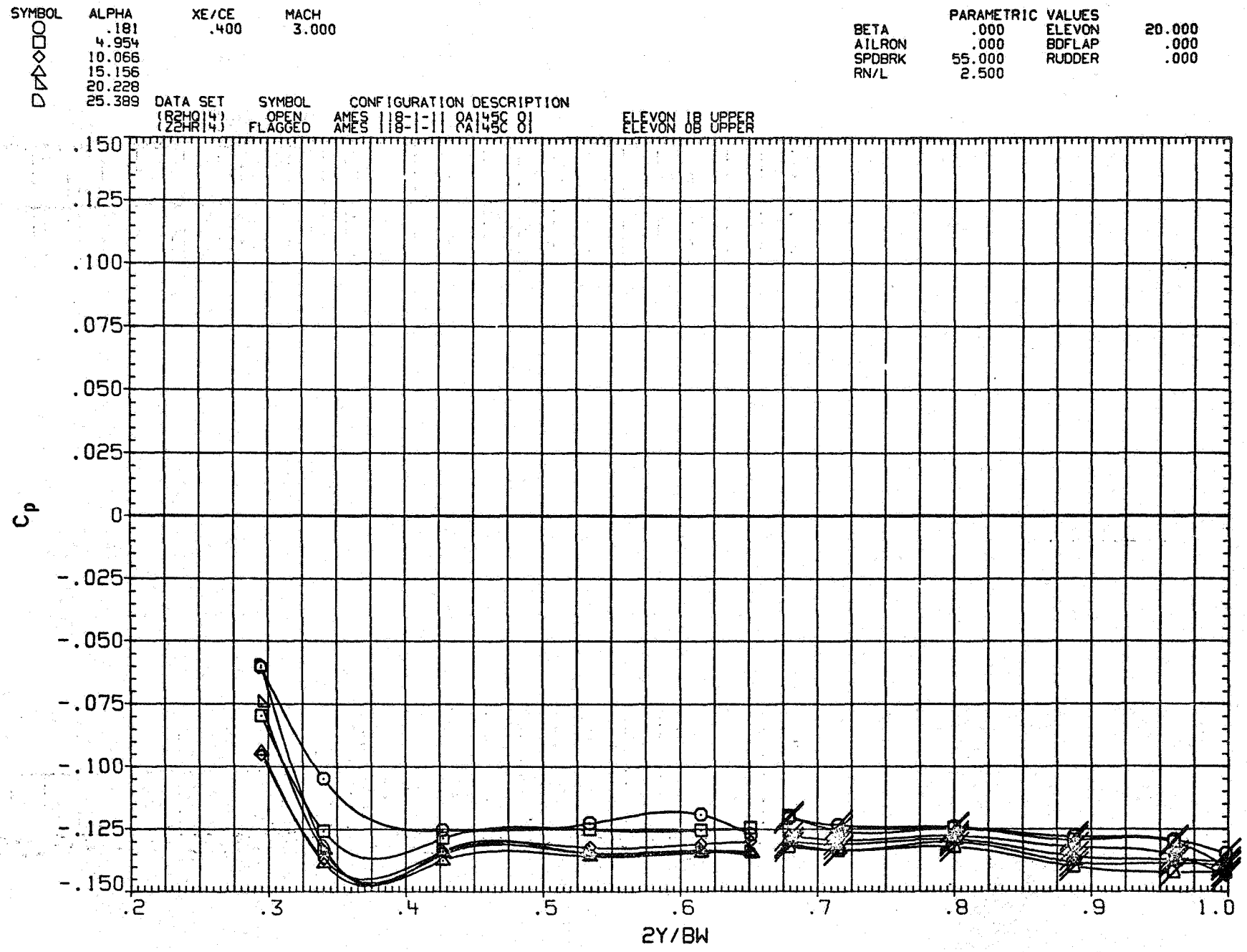


FIG.75 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

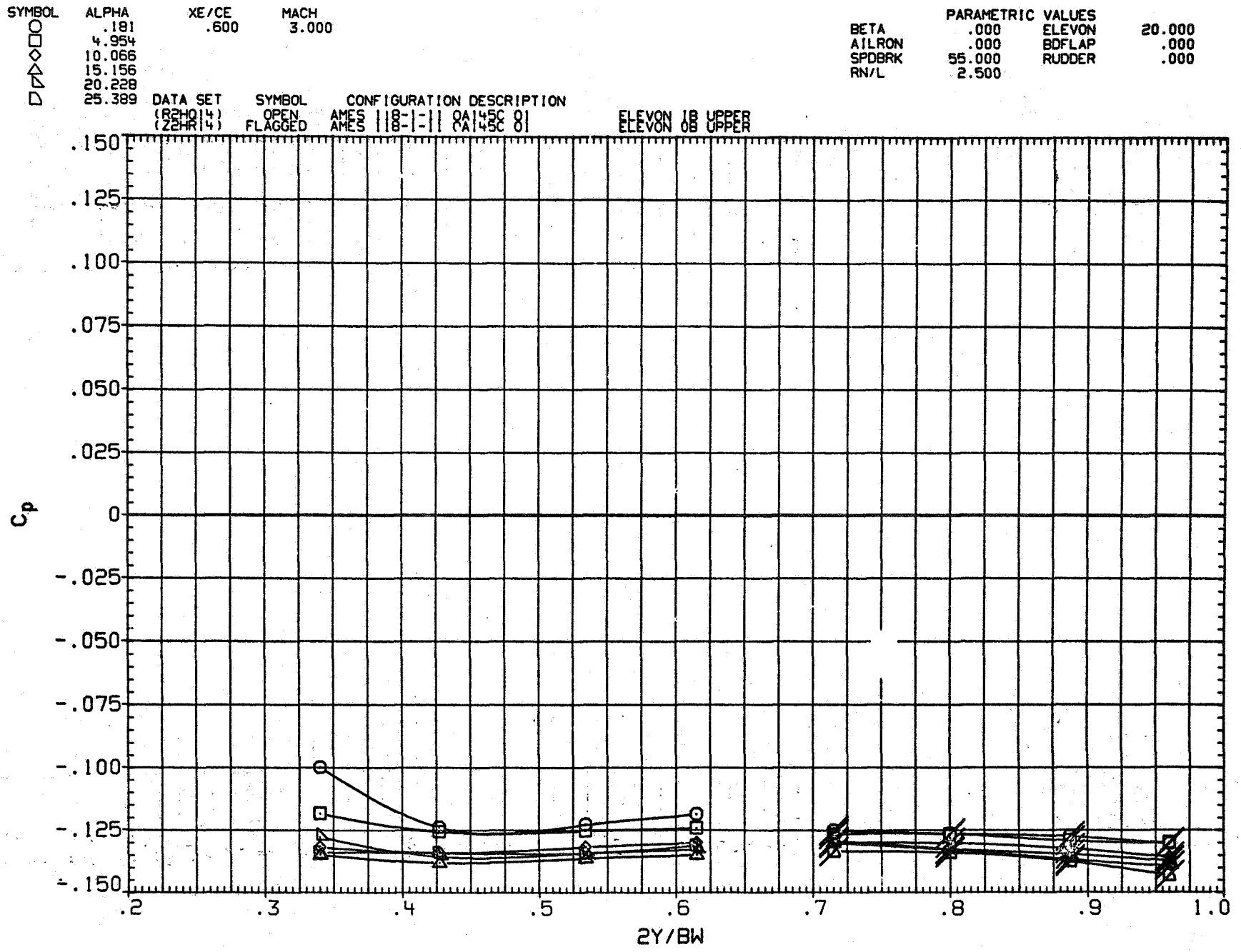


FIG.75 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

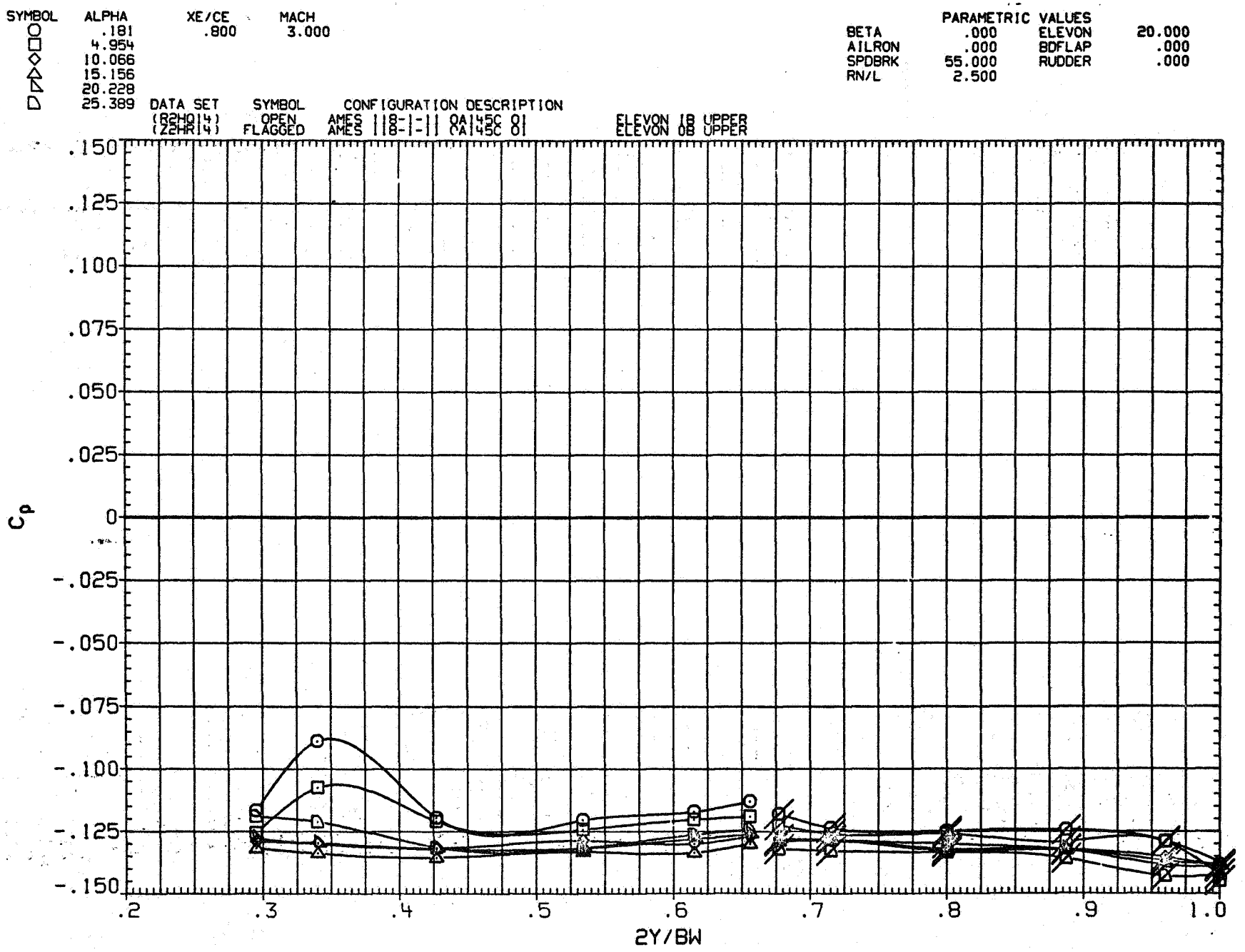


FIG.75 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

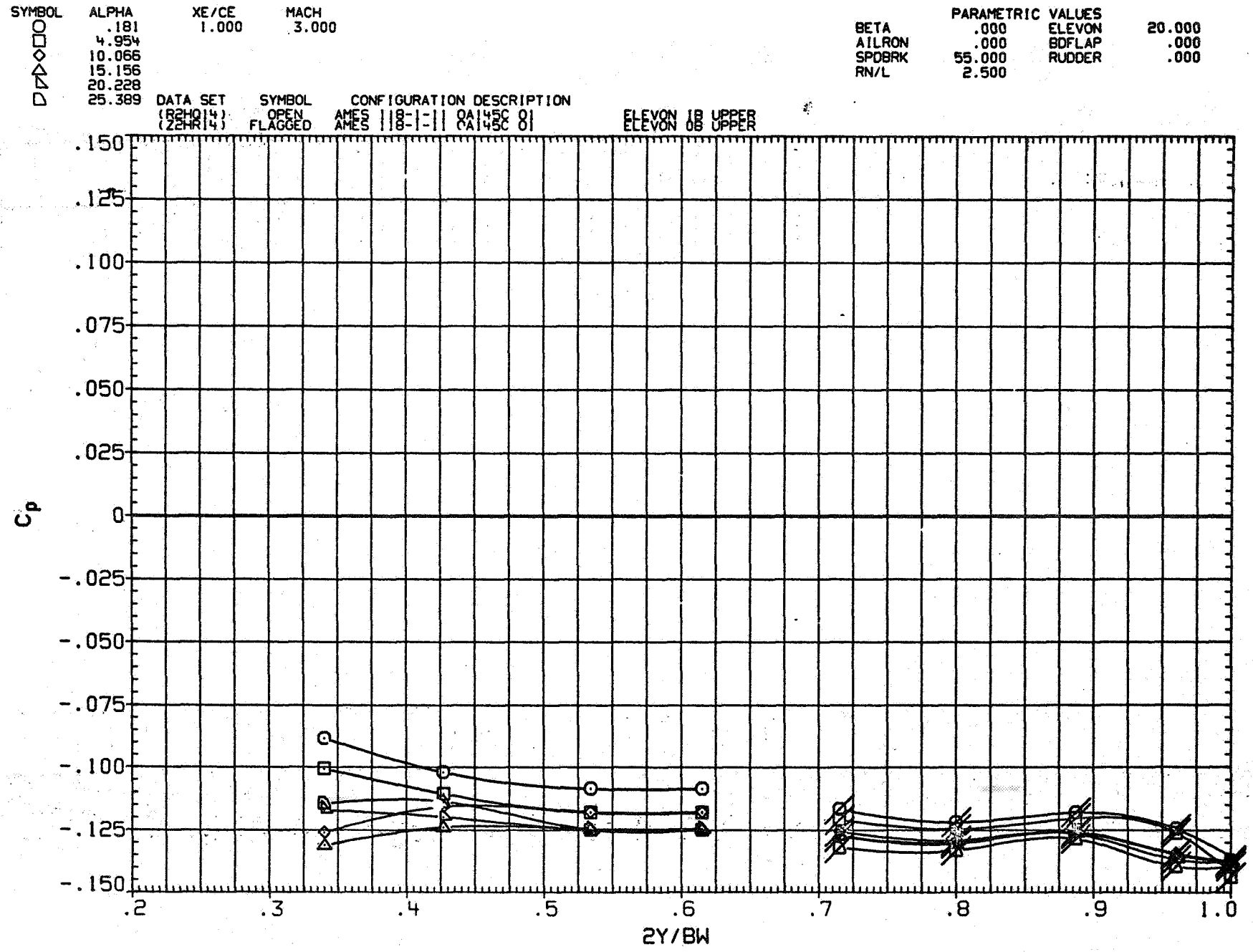


FIG.75 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

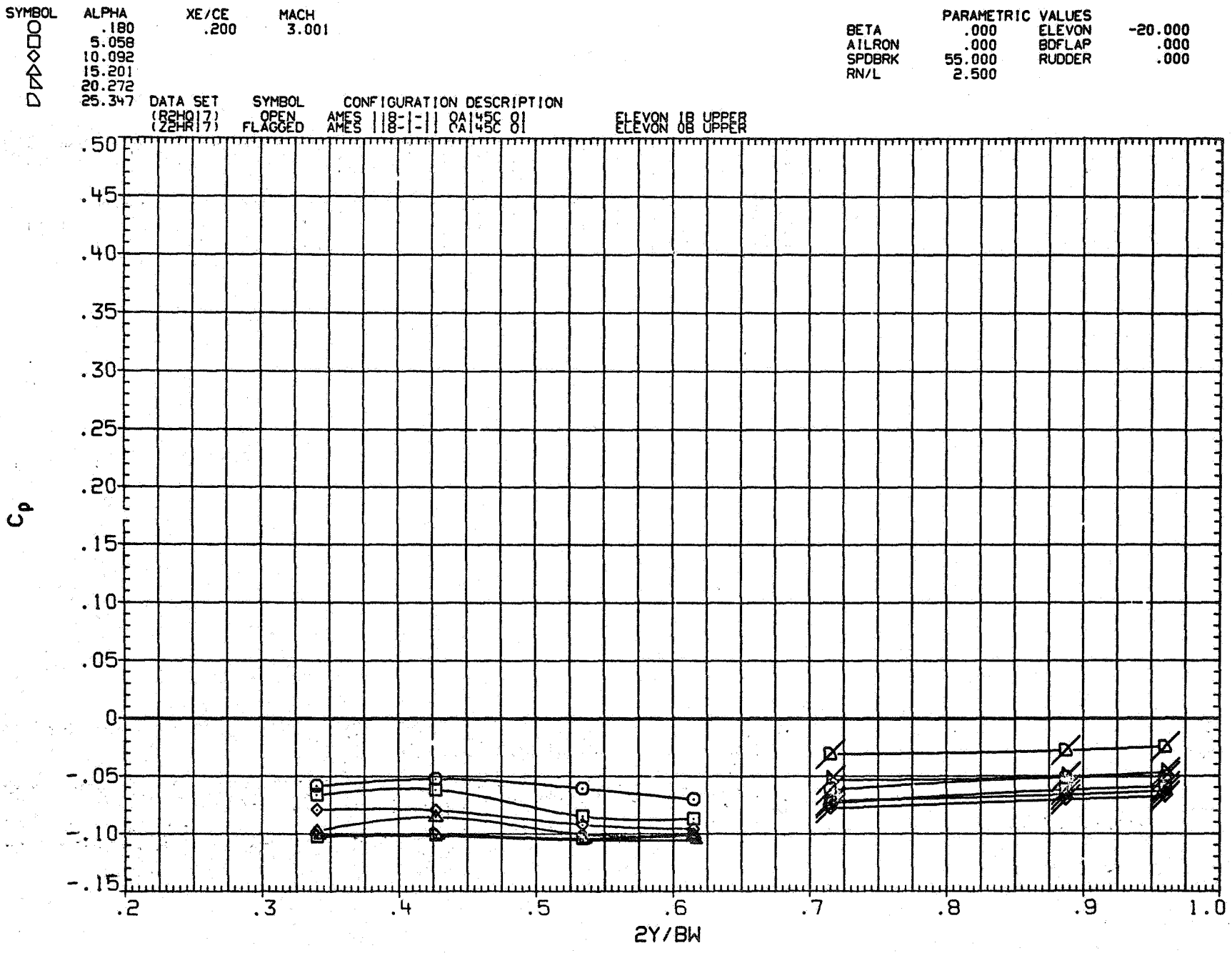


FIG.76 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

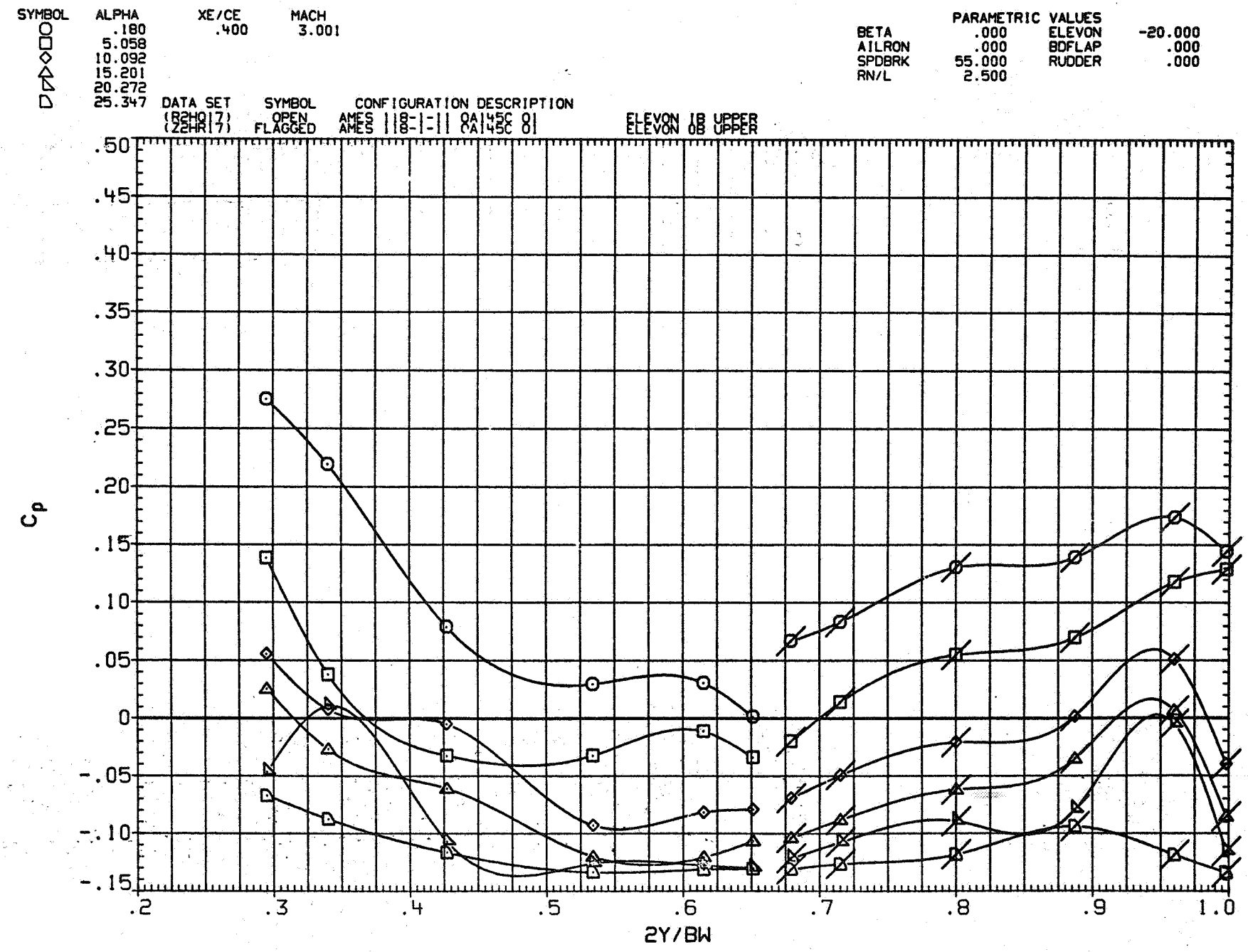


FIG.76 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

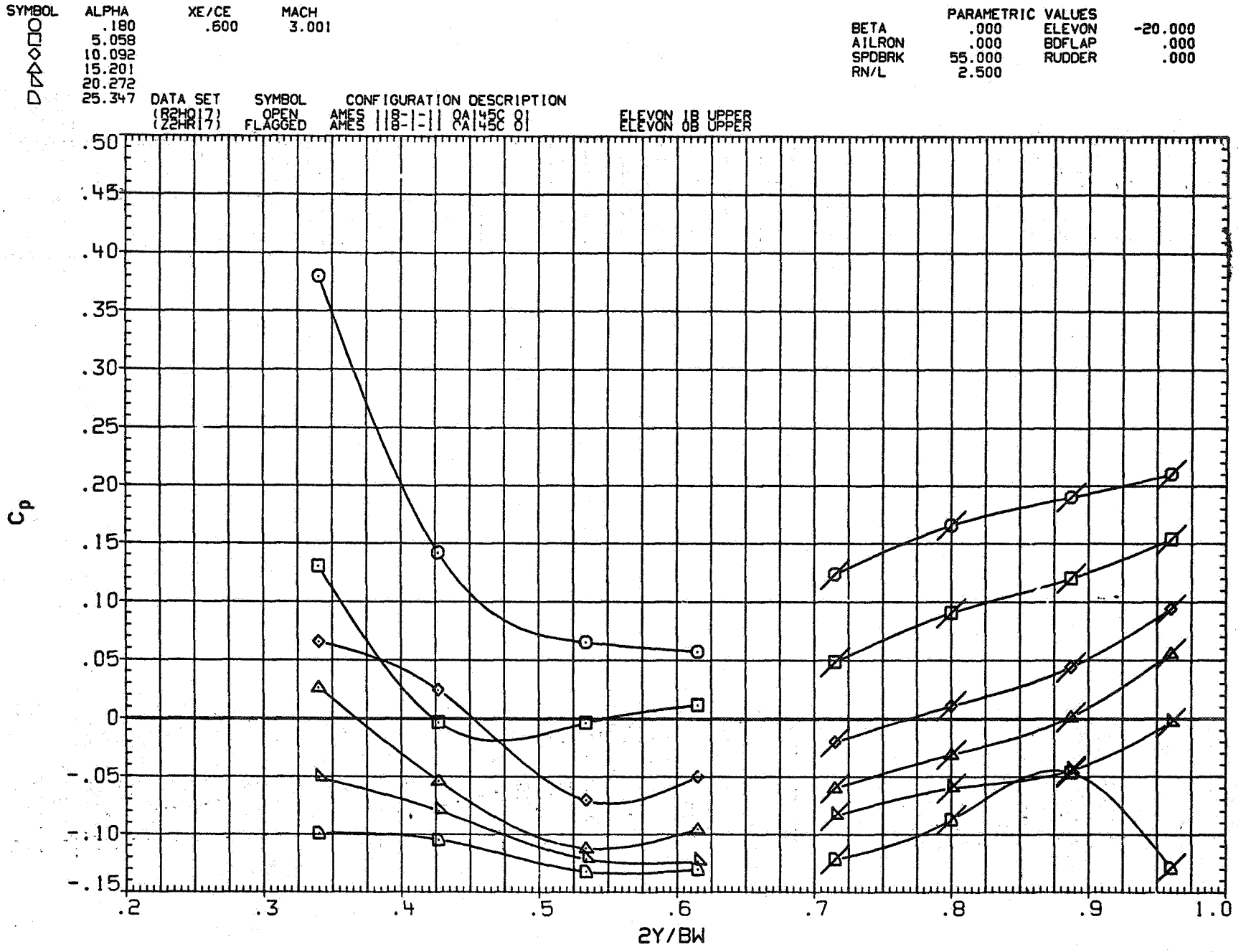


FIG.76 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

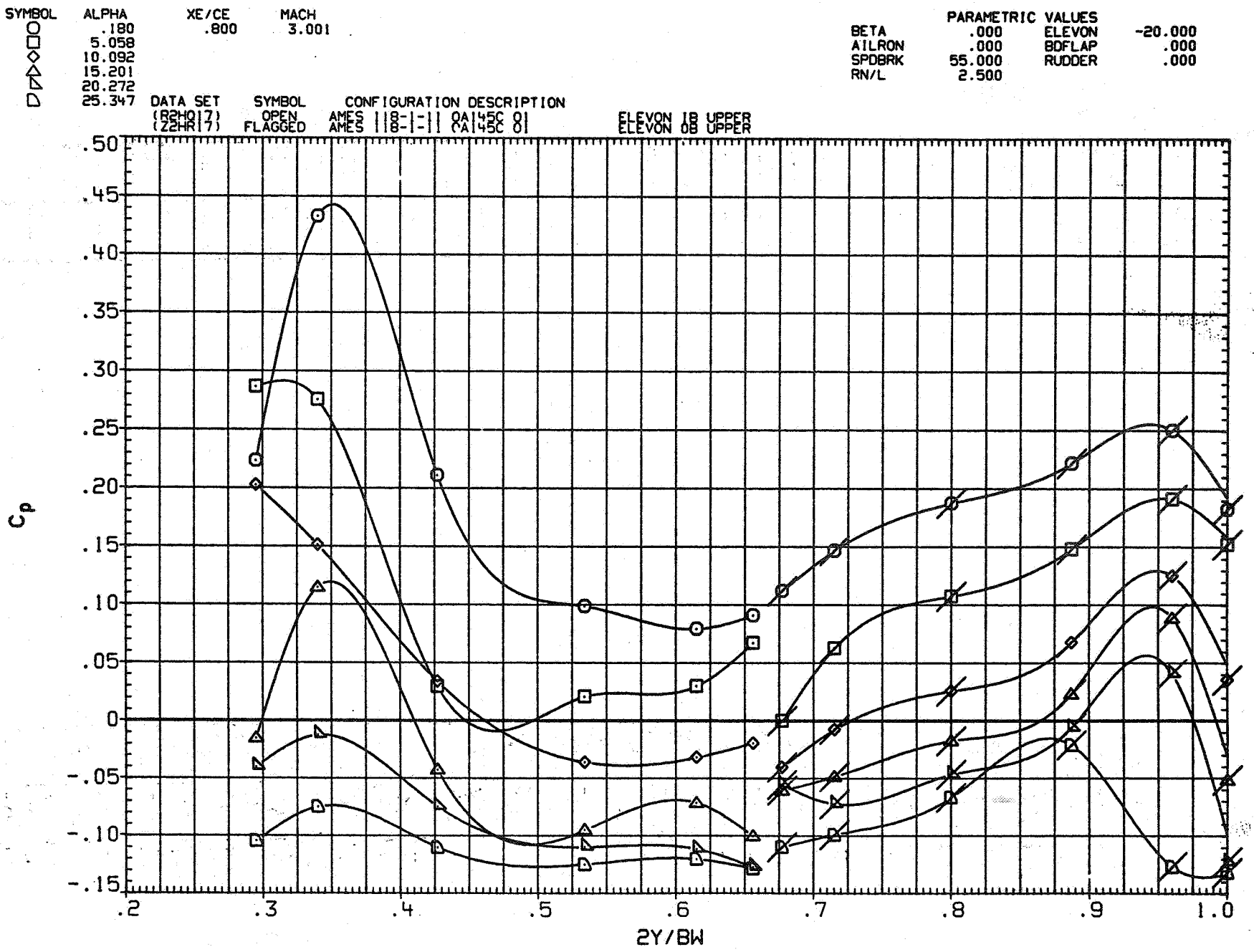


FIG.76 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

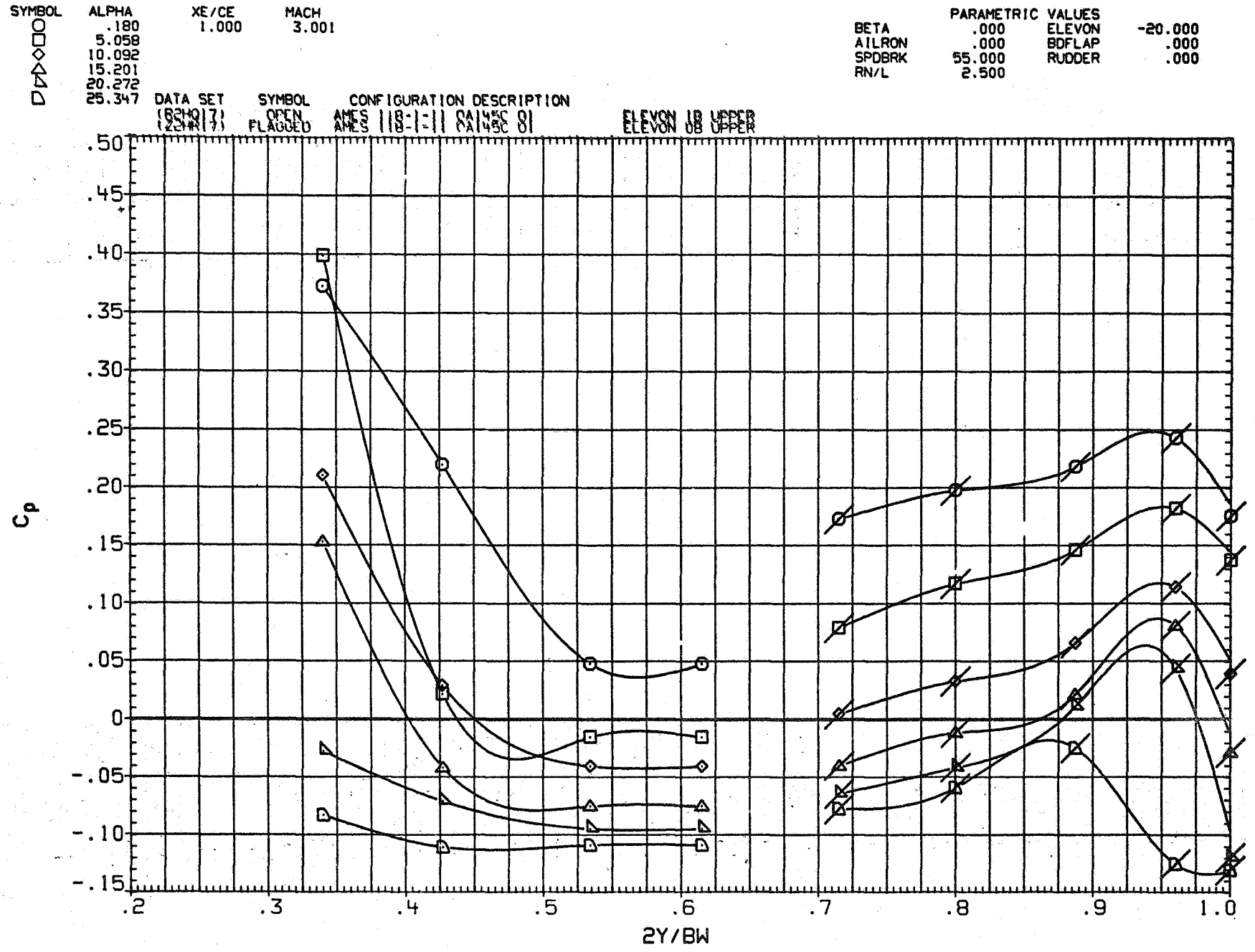


FIG.76 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

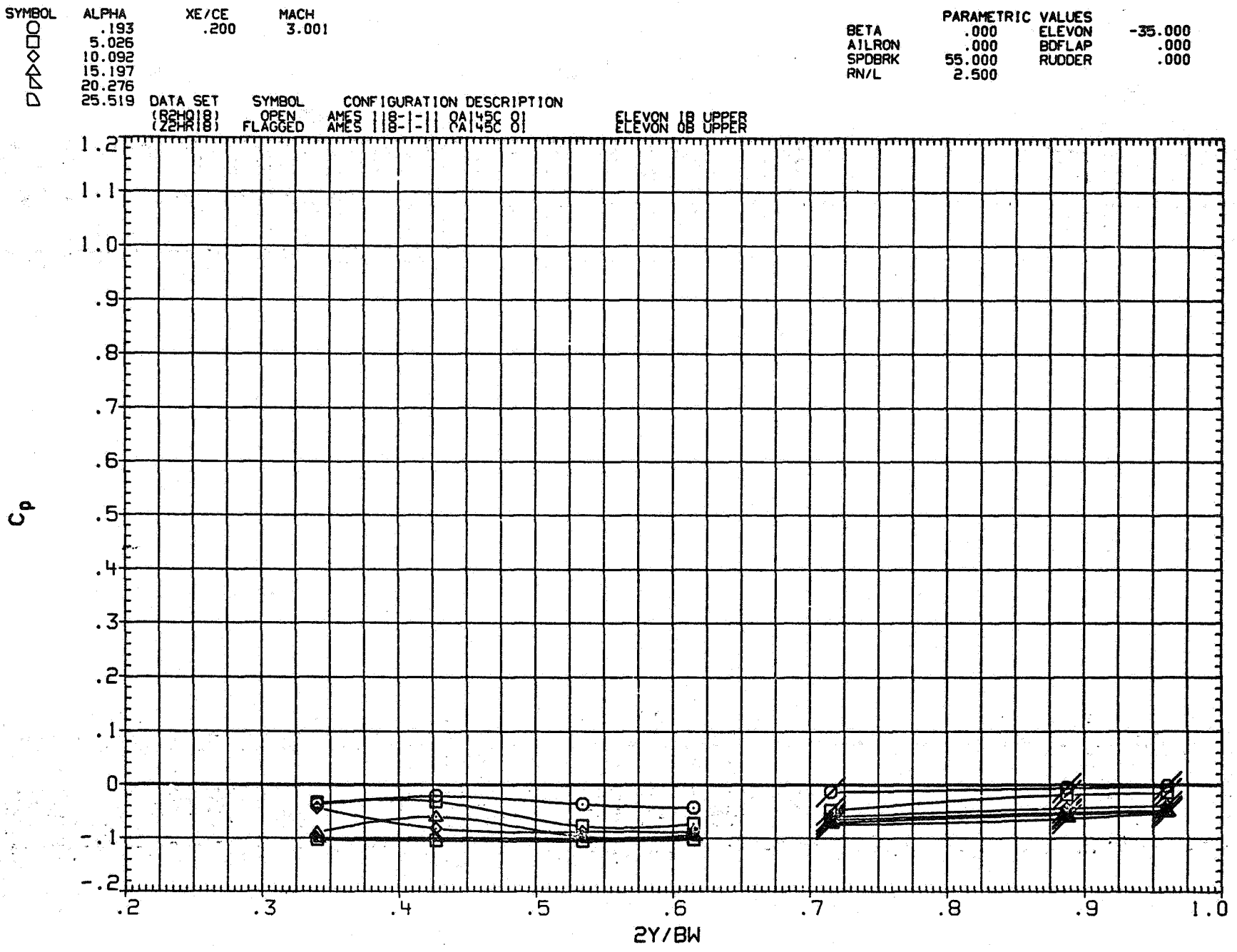


FIG.77 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

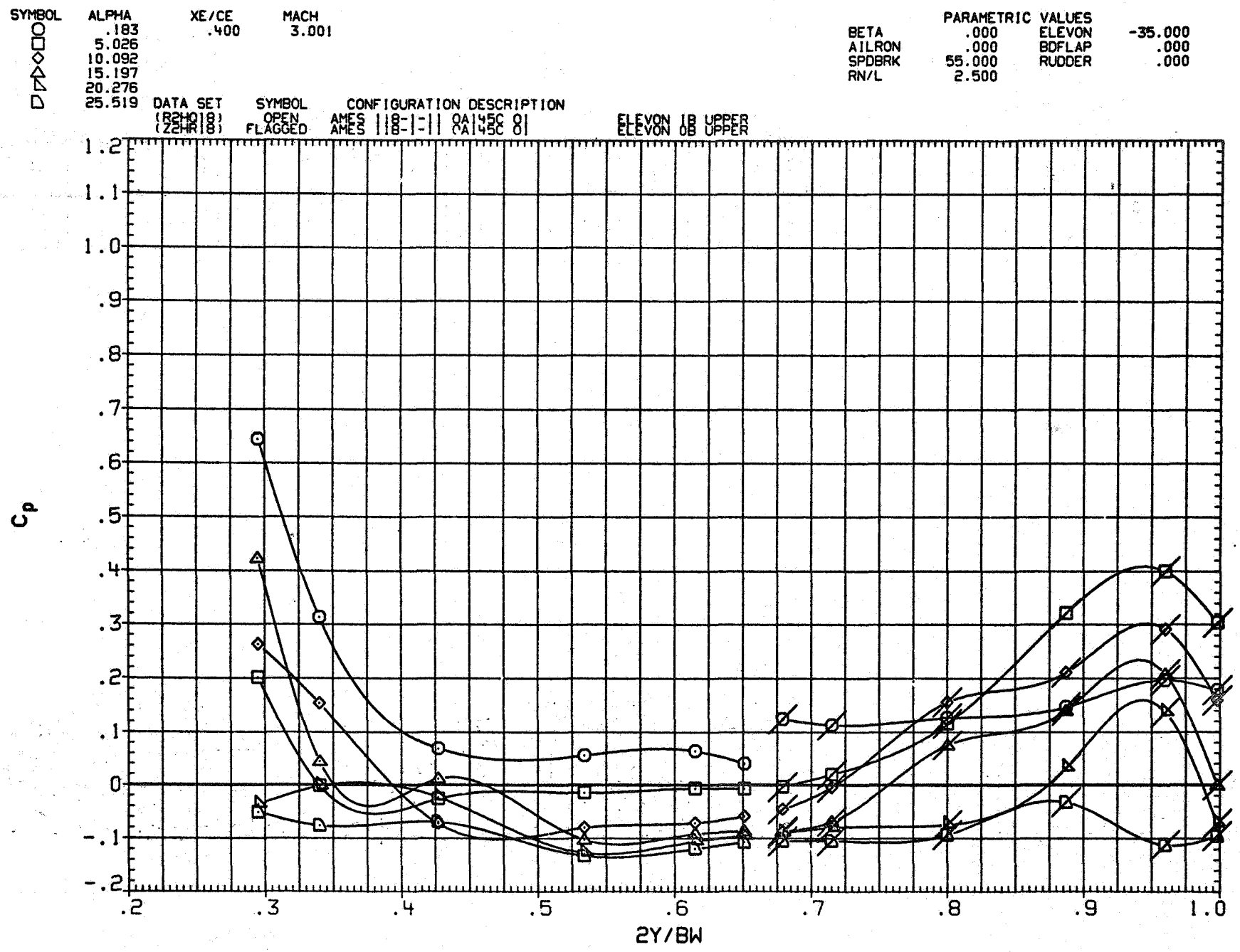


FIG.77 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

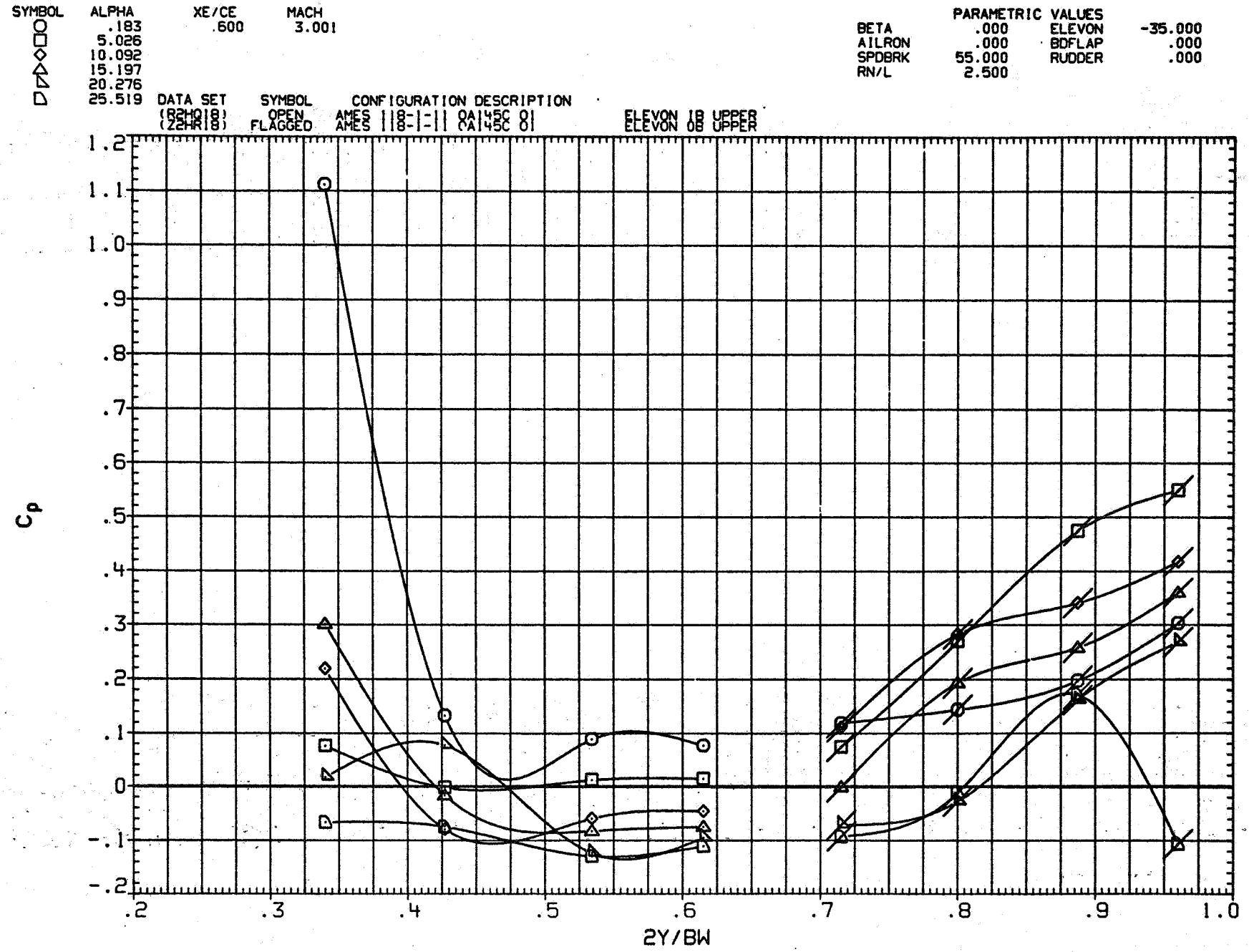


FIG.77 0A145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

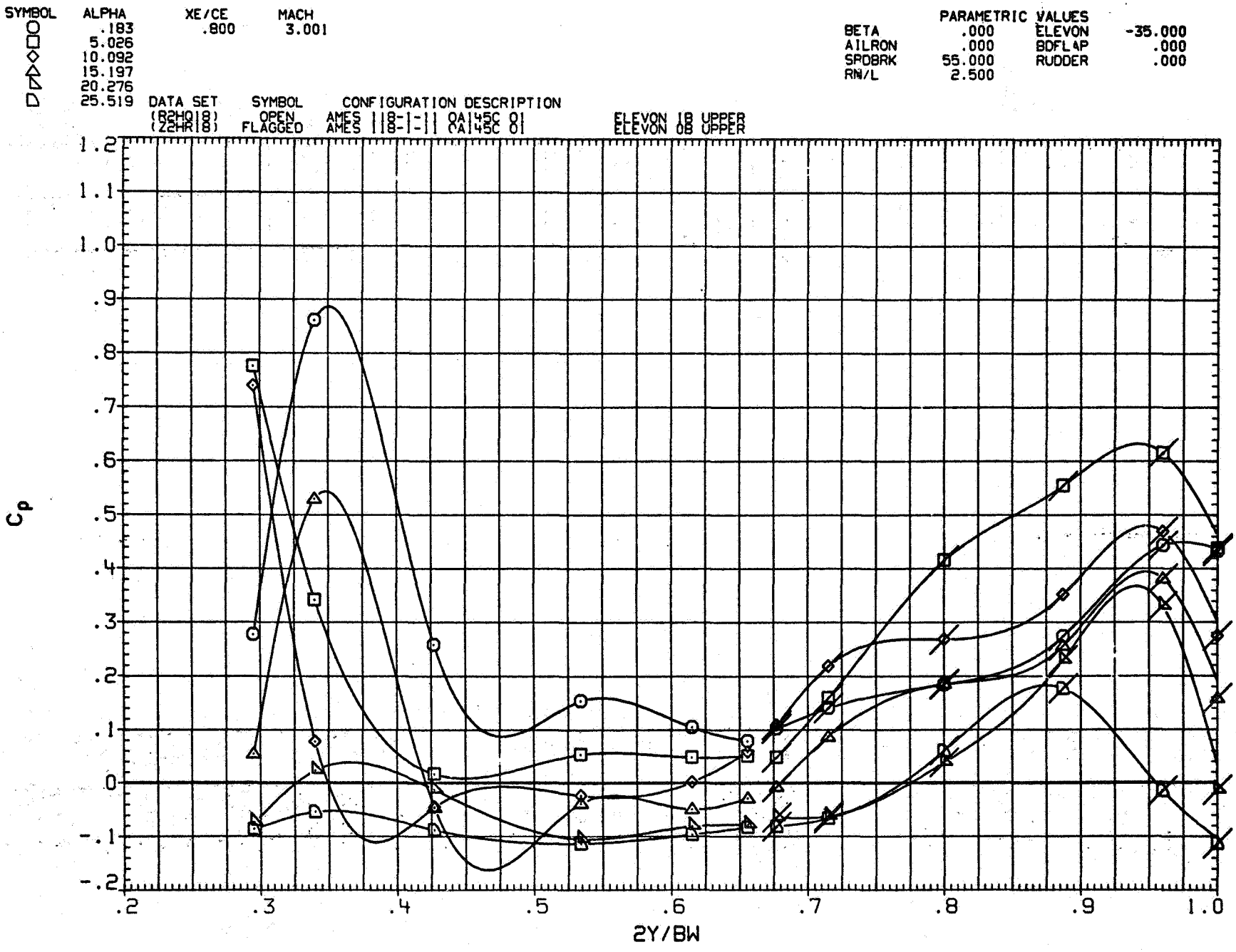


FIG.77 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

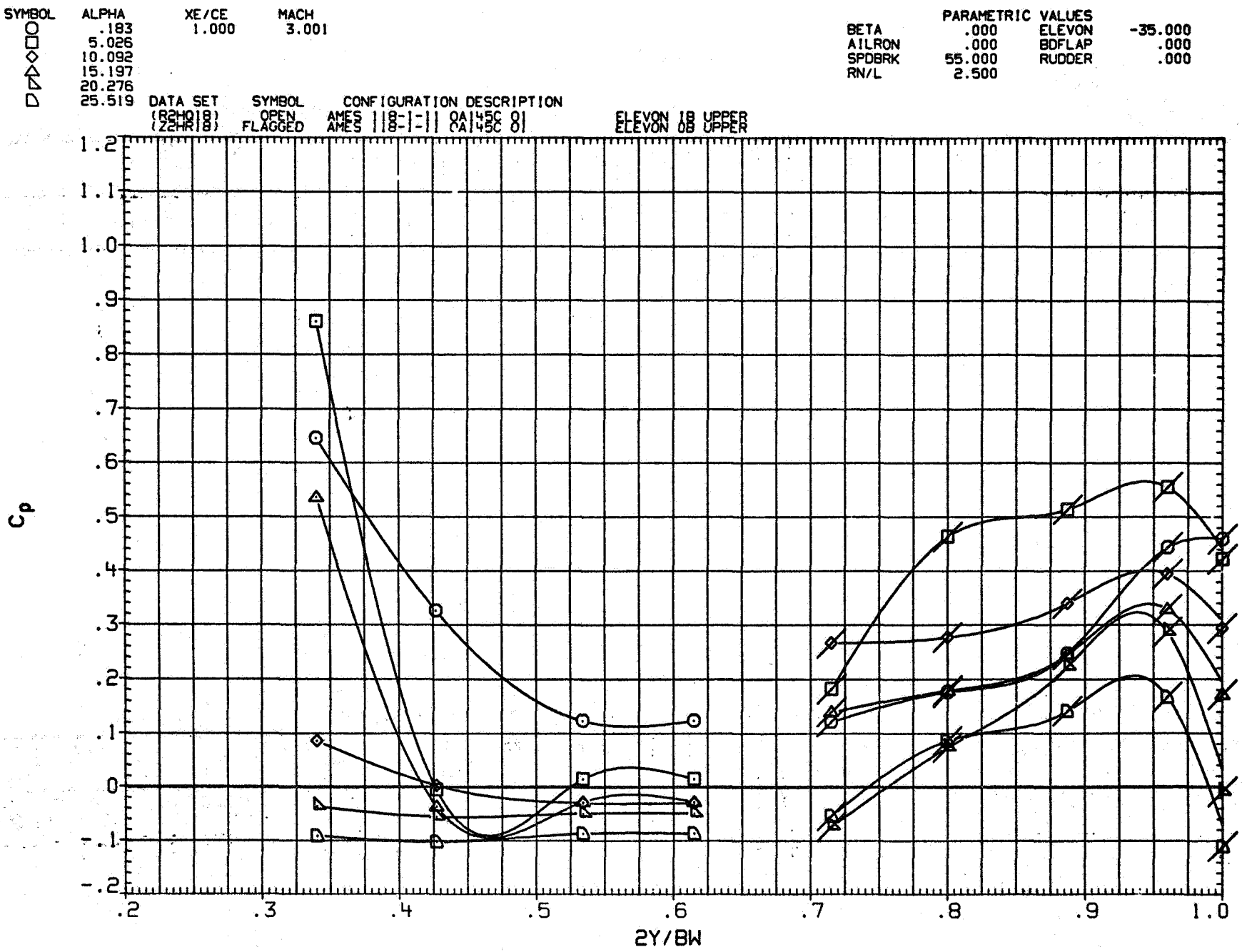


FIG.77 OA145C ELEVON CP VS. 2Y/BW
UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

SYMBOL	ALPHA	XE/CE	MACH
○	.307	-.100	2.493
□	4.010		
◇	10.124		
△	15.236		
▽	20.318		
◻	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(R2HC02)	OPEN	AMES 18-T-11 0A145C 01 ELEVON 1B LOWER
(R2HD02)	FLAGGED	AMES 18-T-11 0A145C 01 ELEVON 0B LOWER

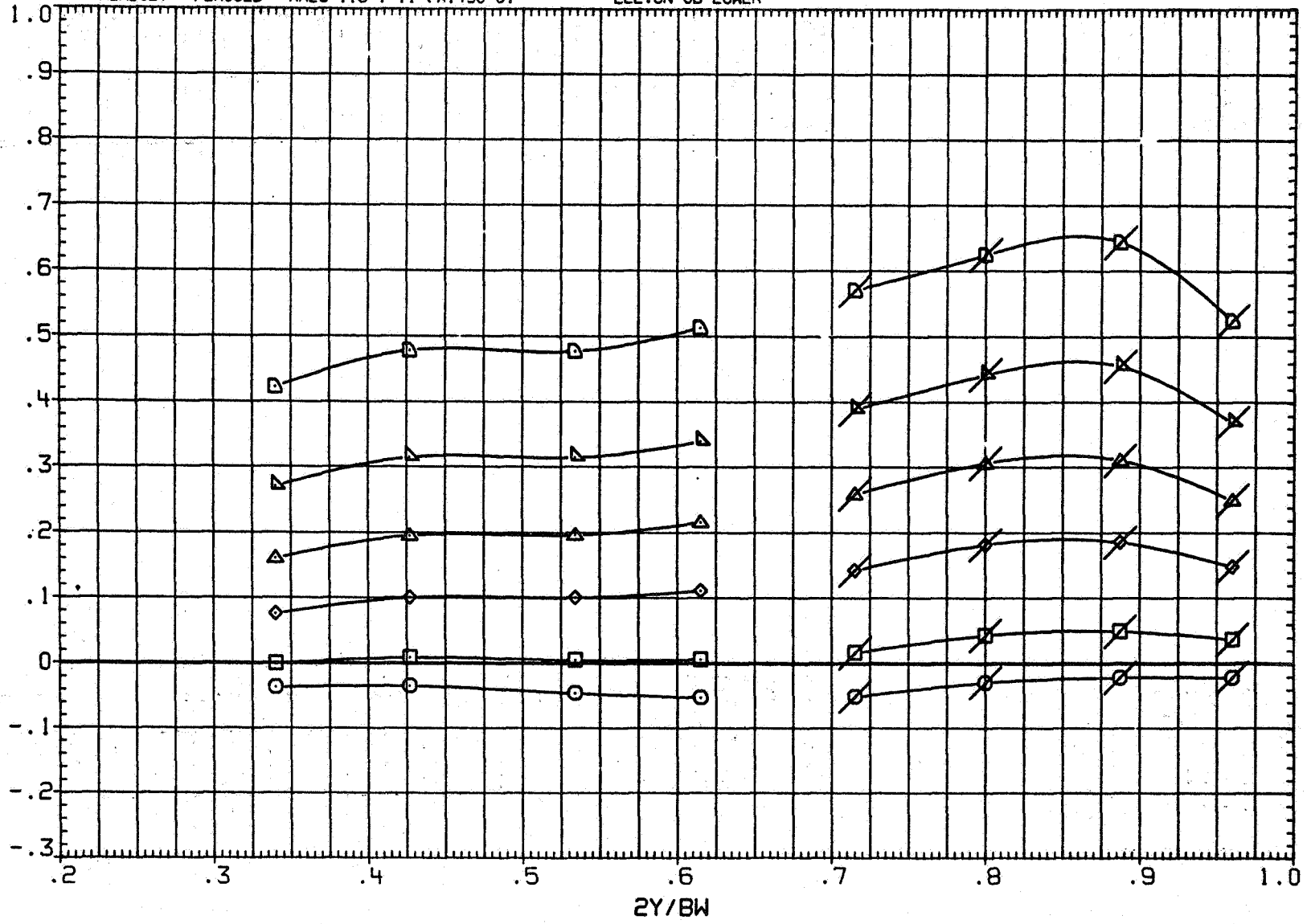


FIG.78 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

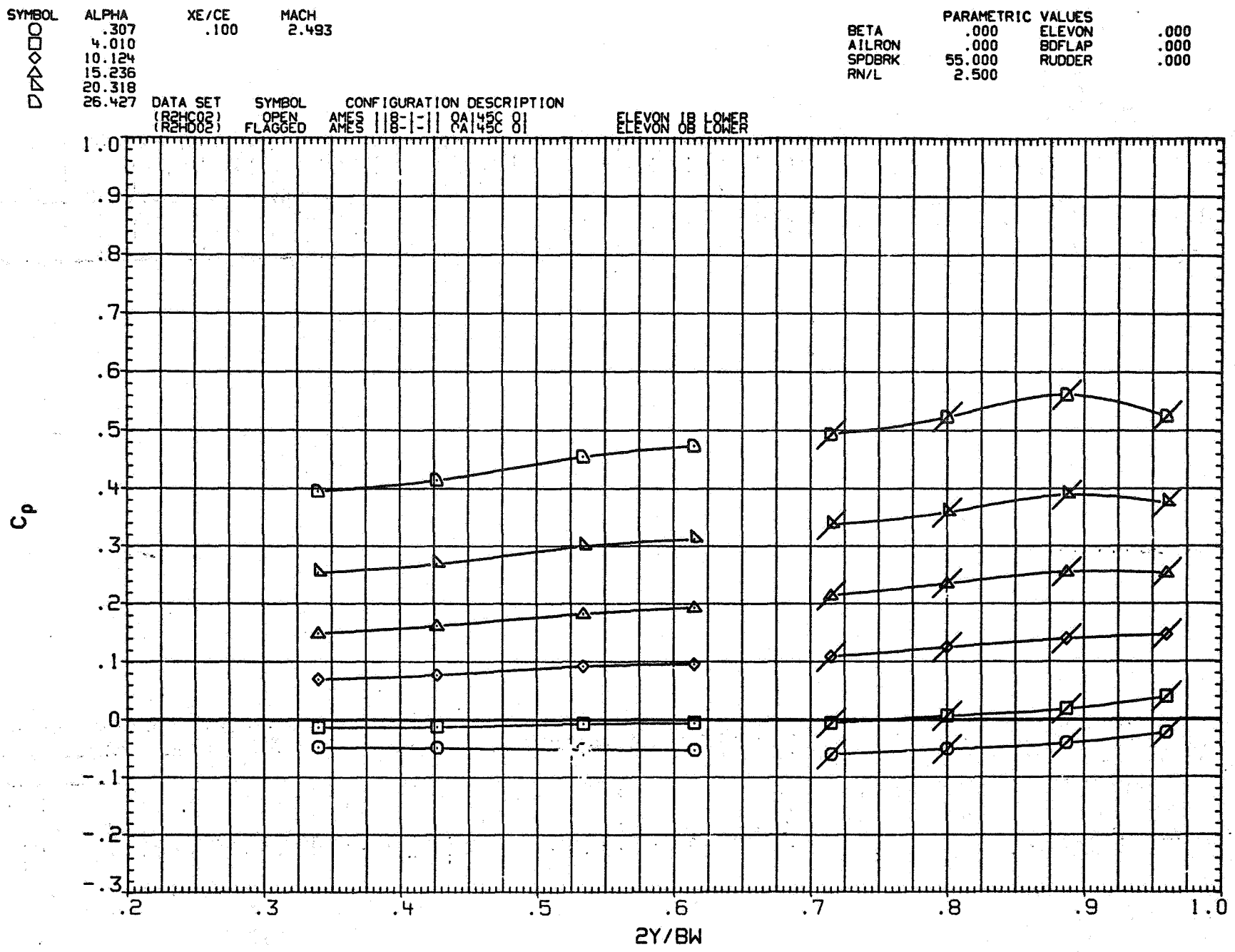


FIG.78 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

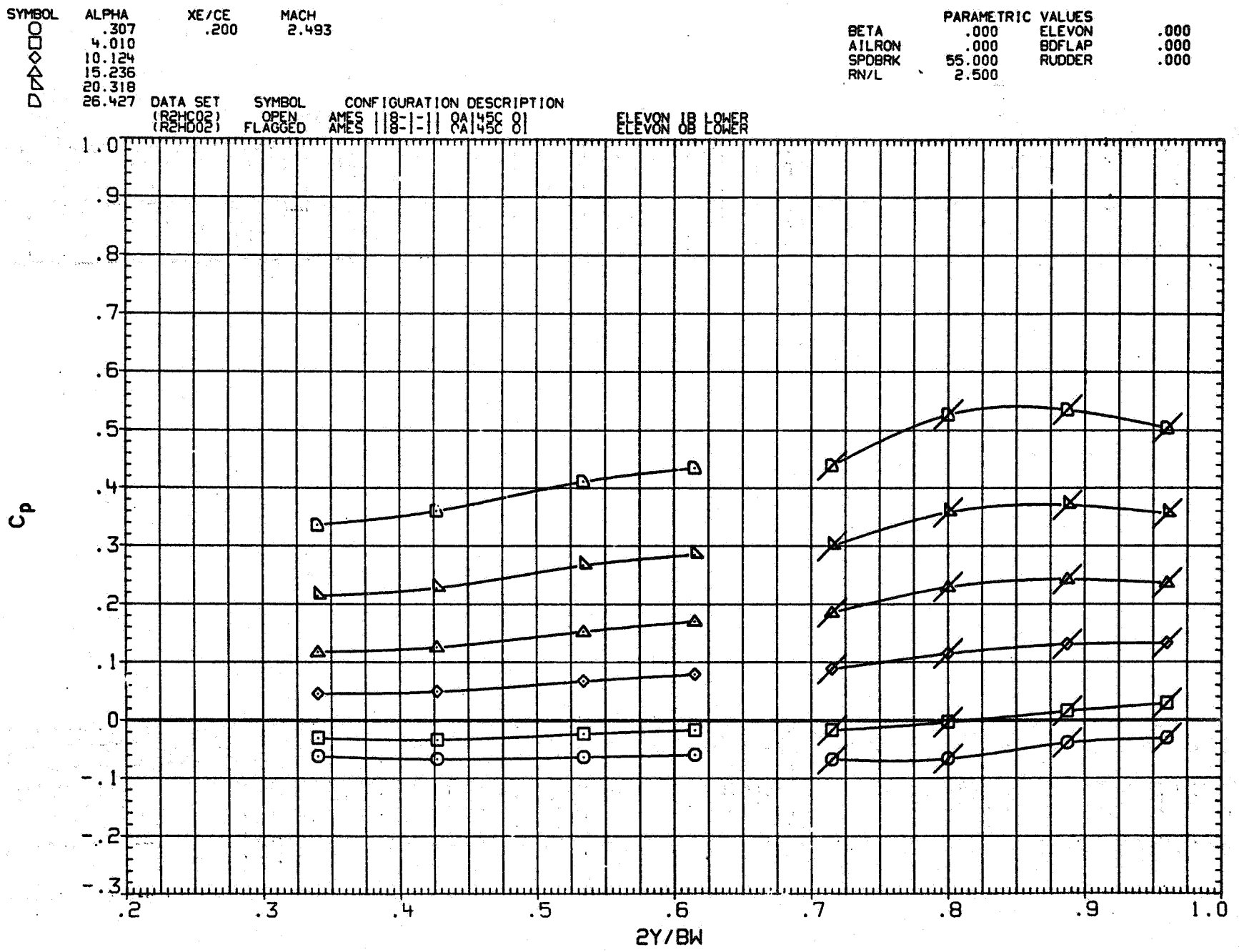


FIG.78 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

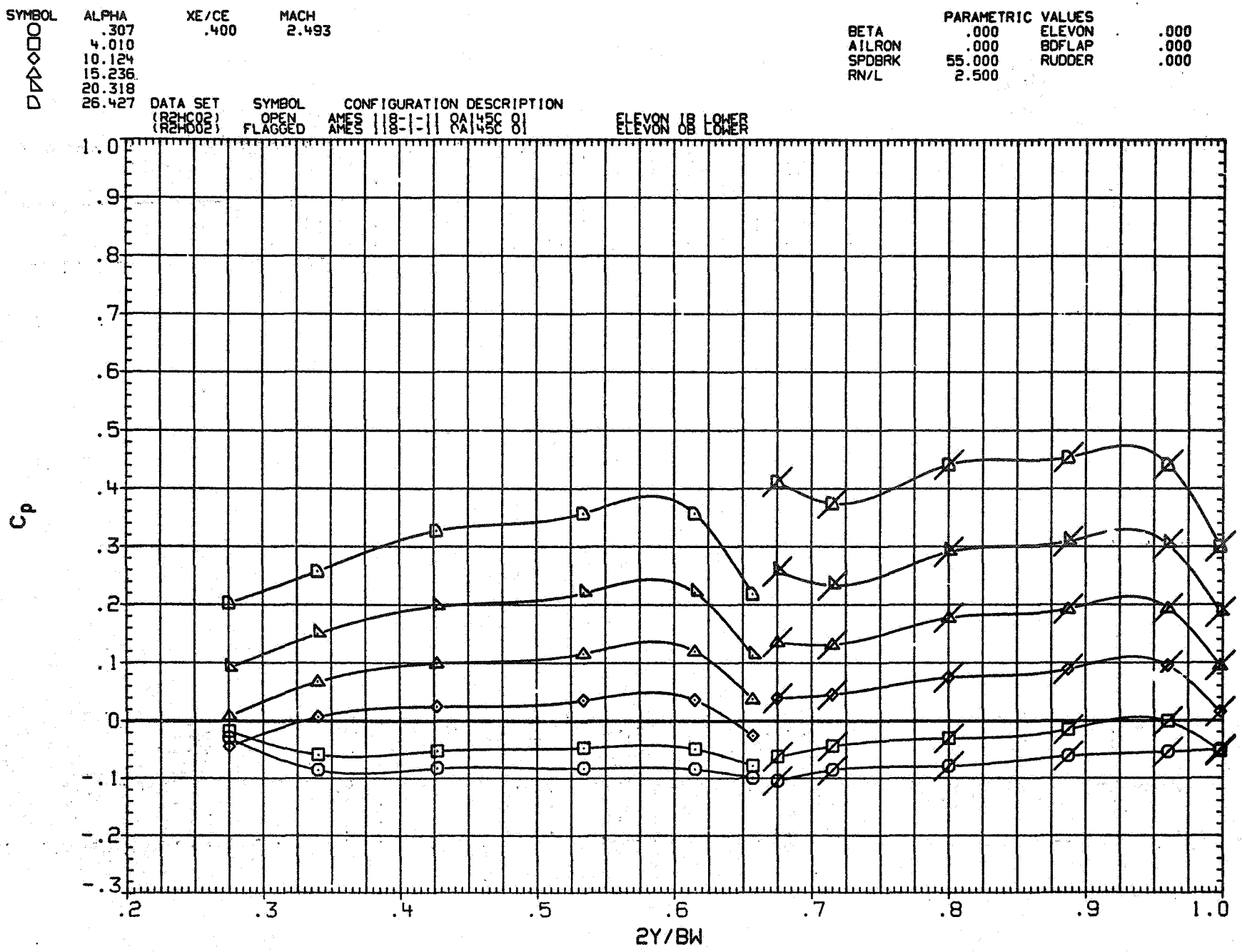


FIG.78 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

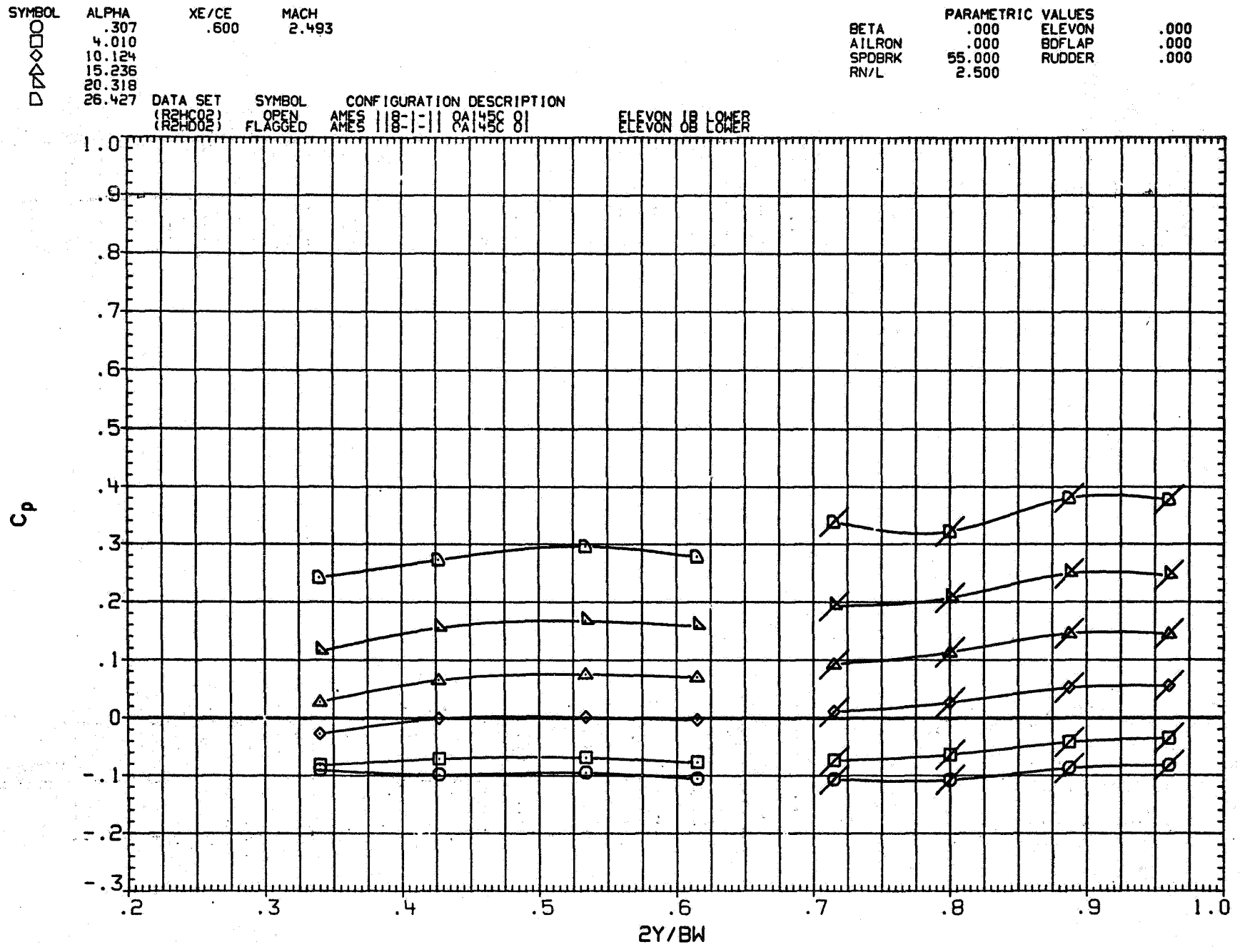


FIG.78 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

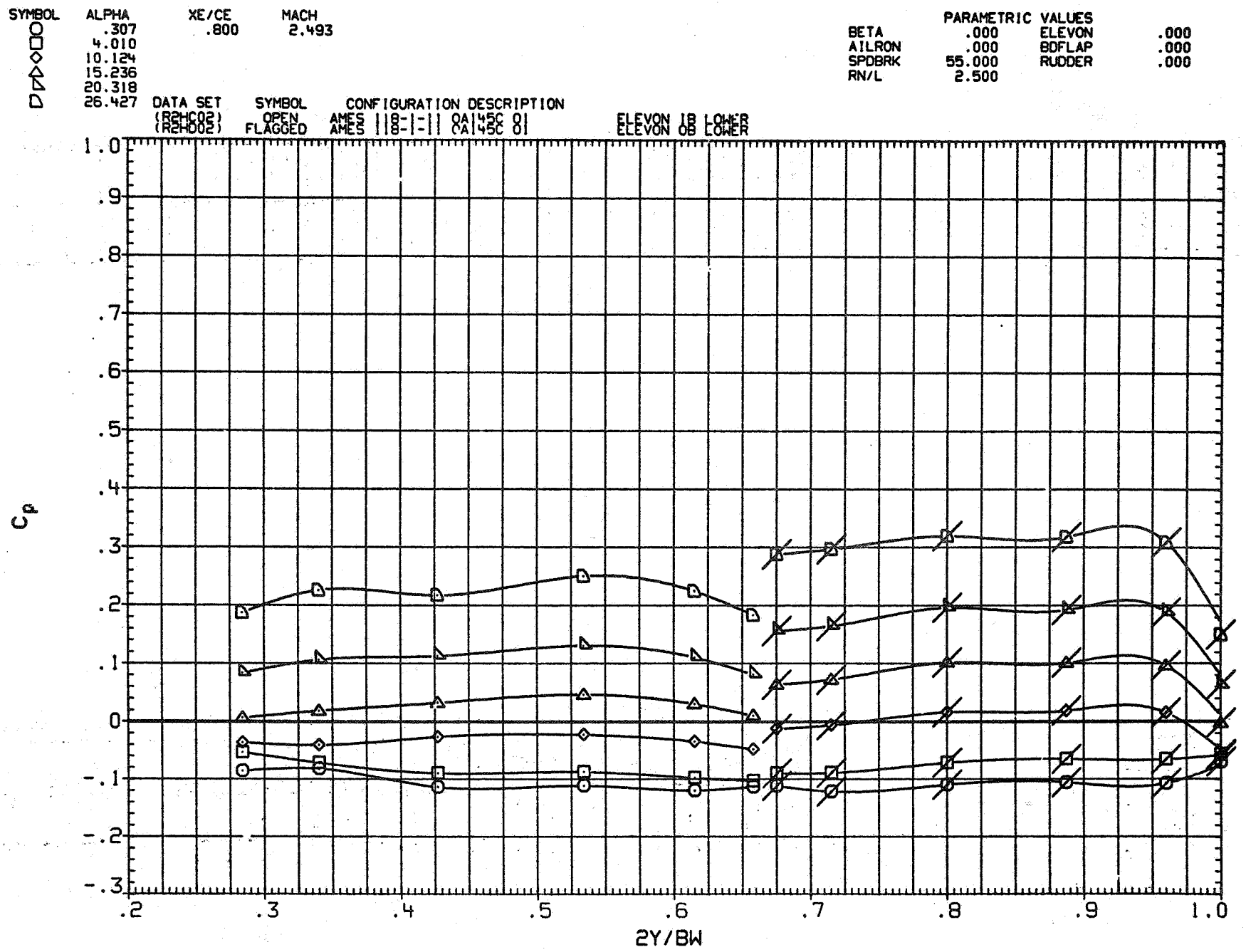


FIG.78 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

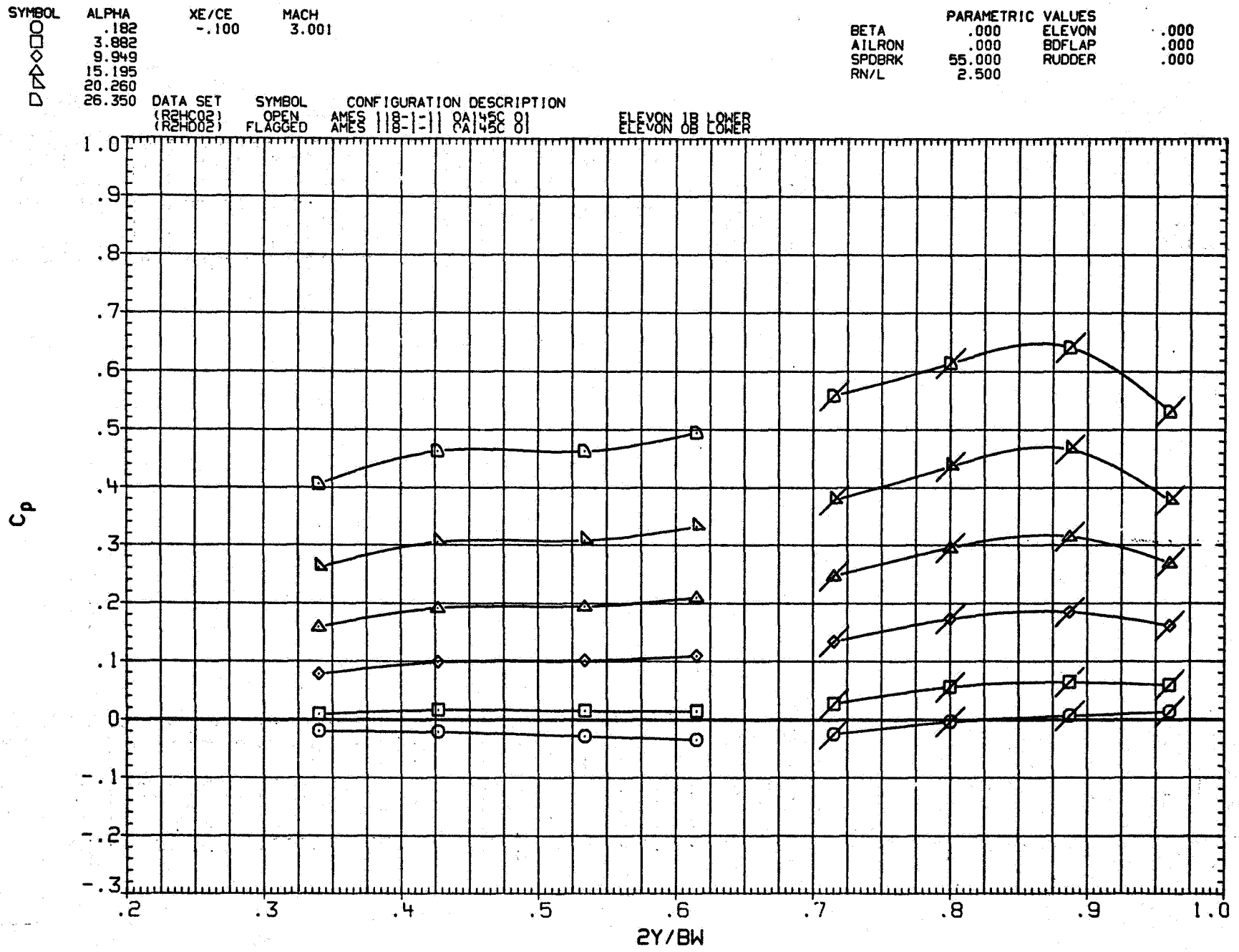


FIG.78 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

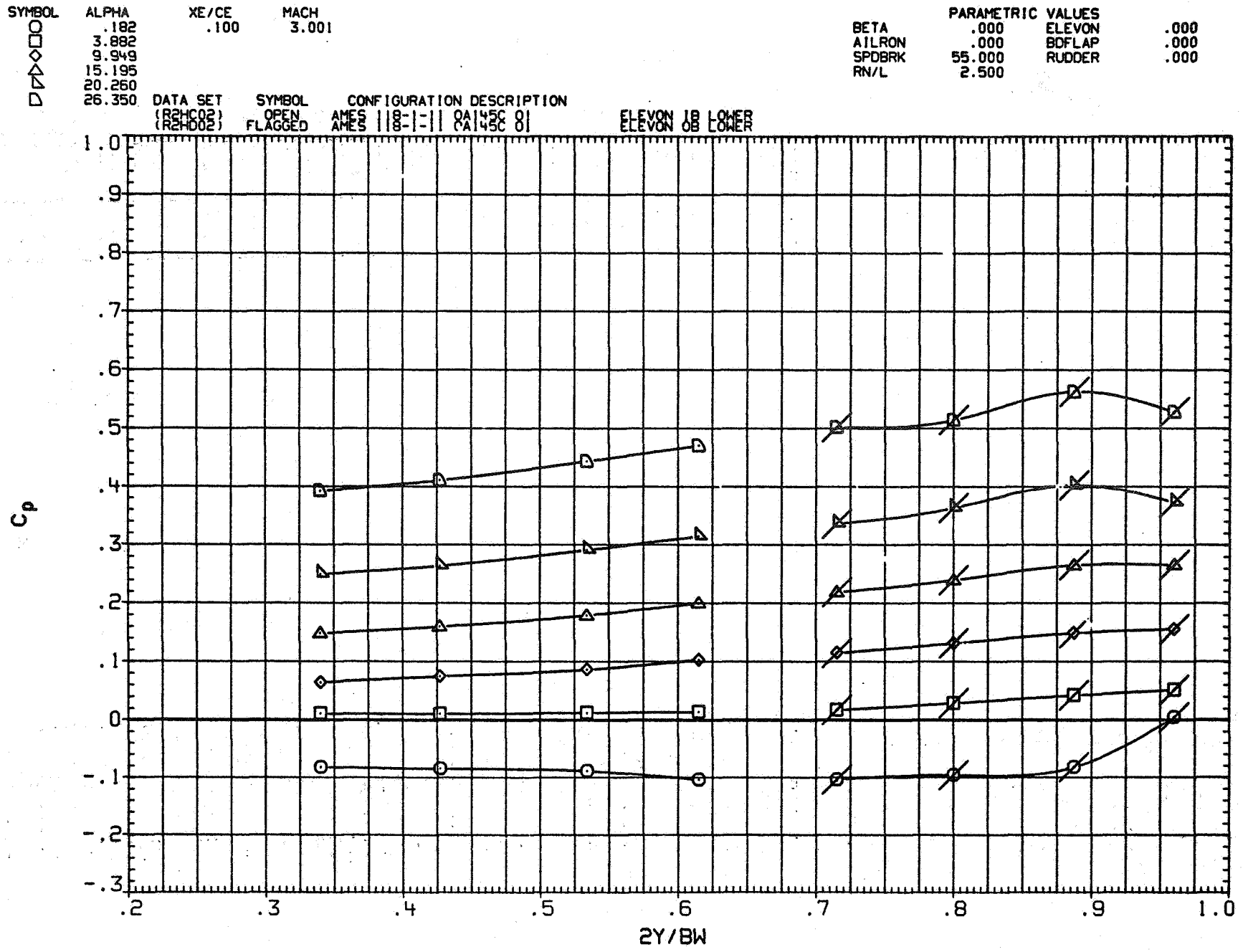


FIG.78 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

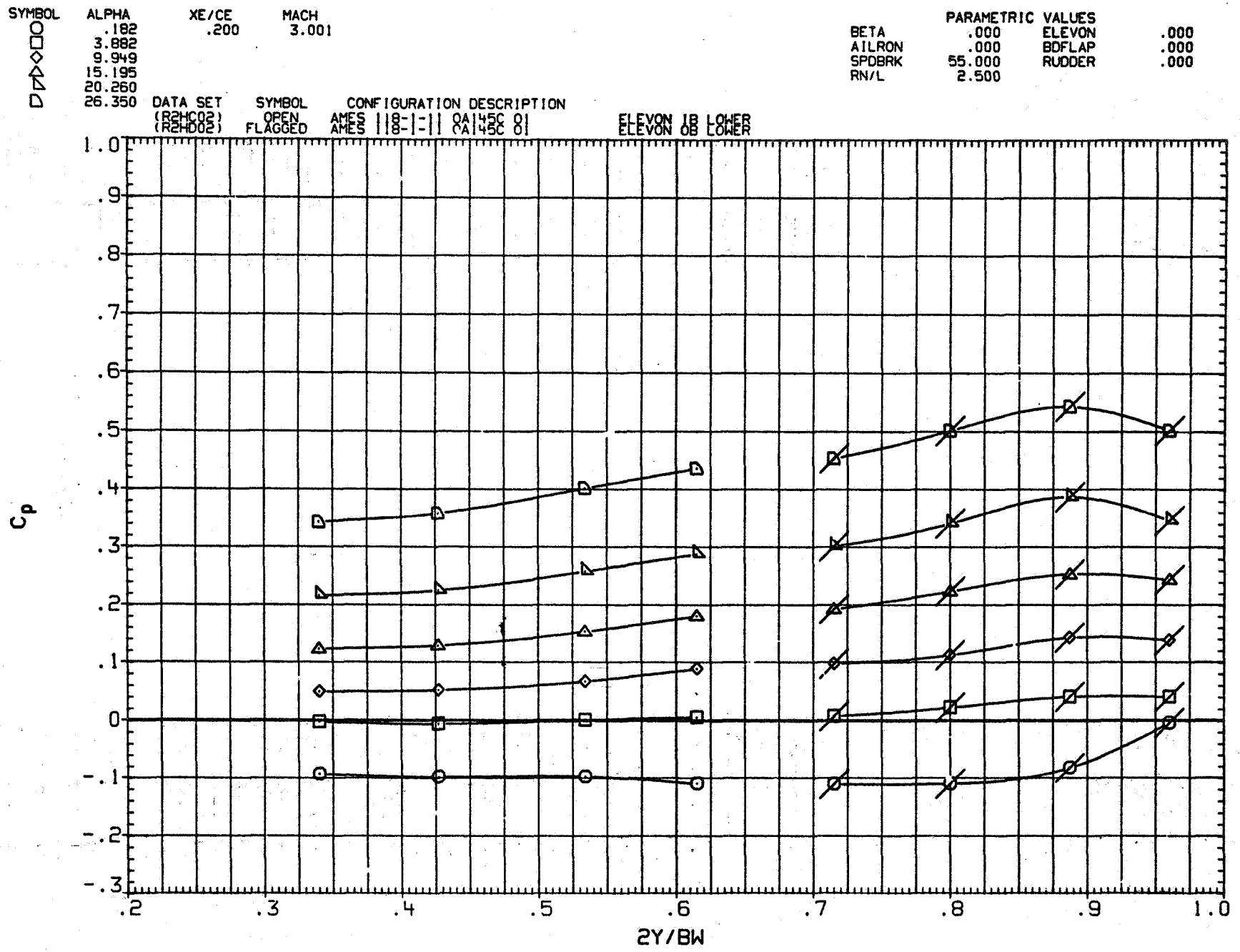


FIG.78 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

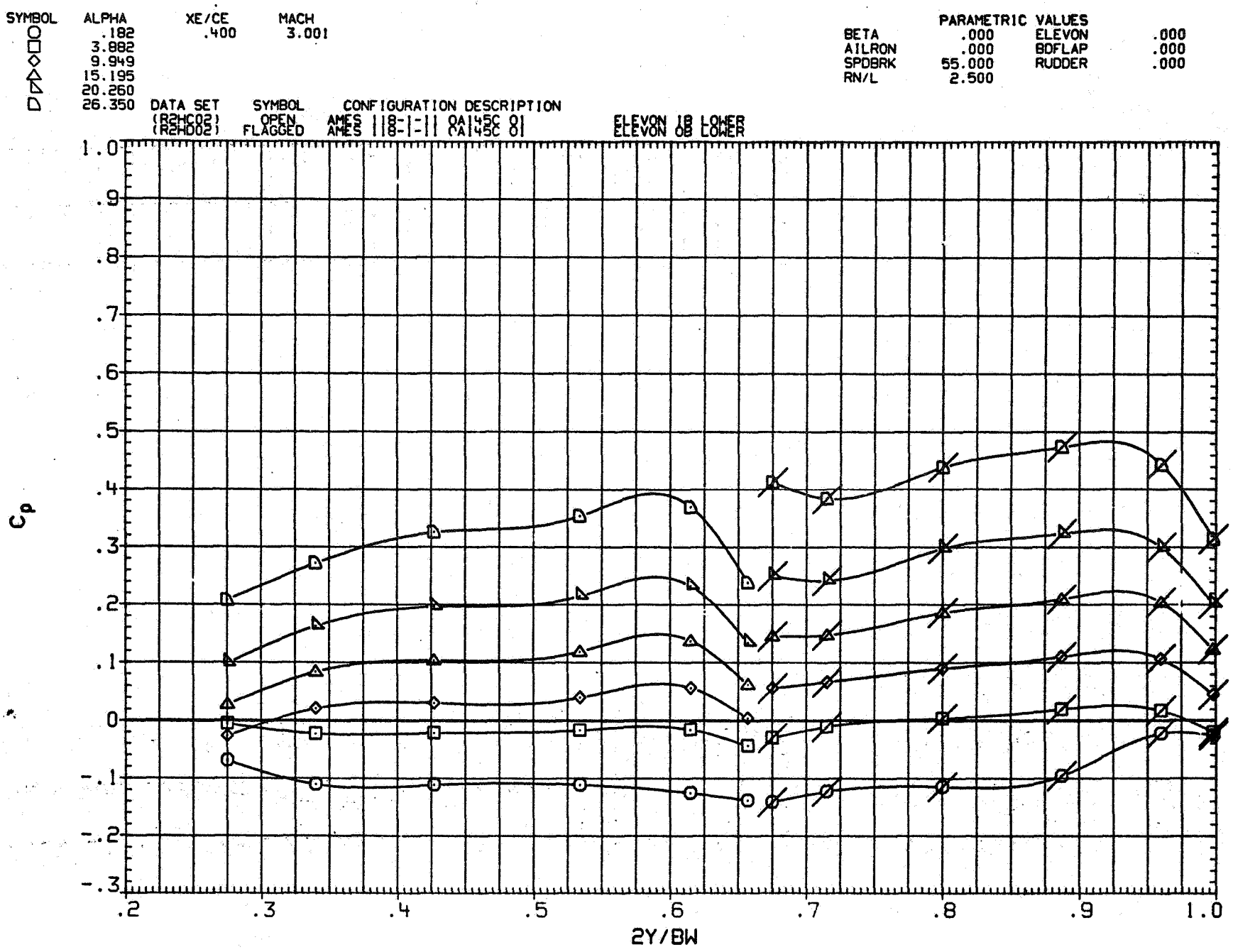


FIG.78 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

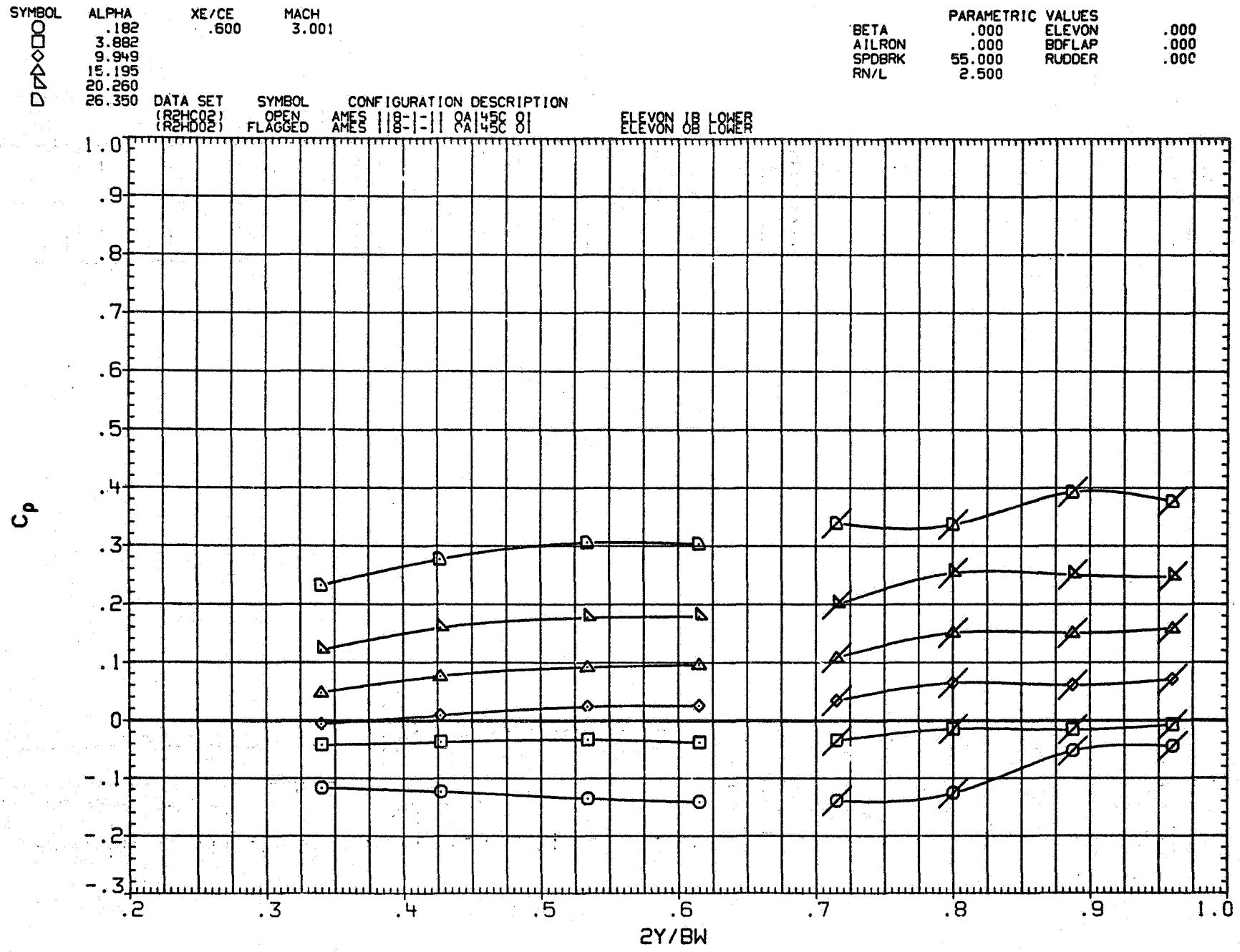


FIG.78 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

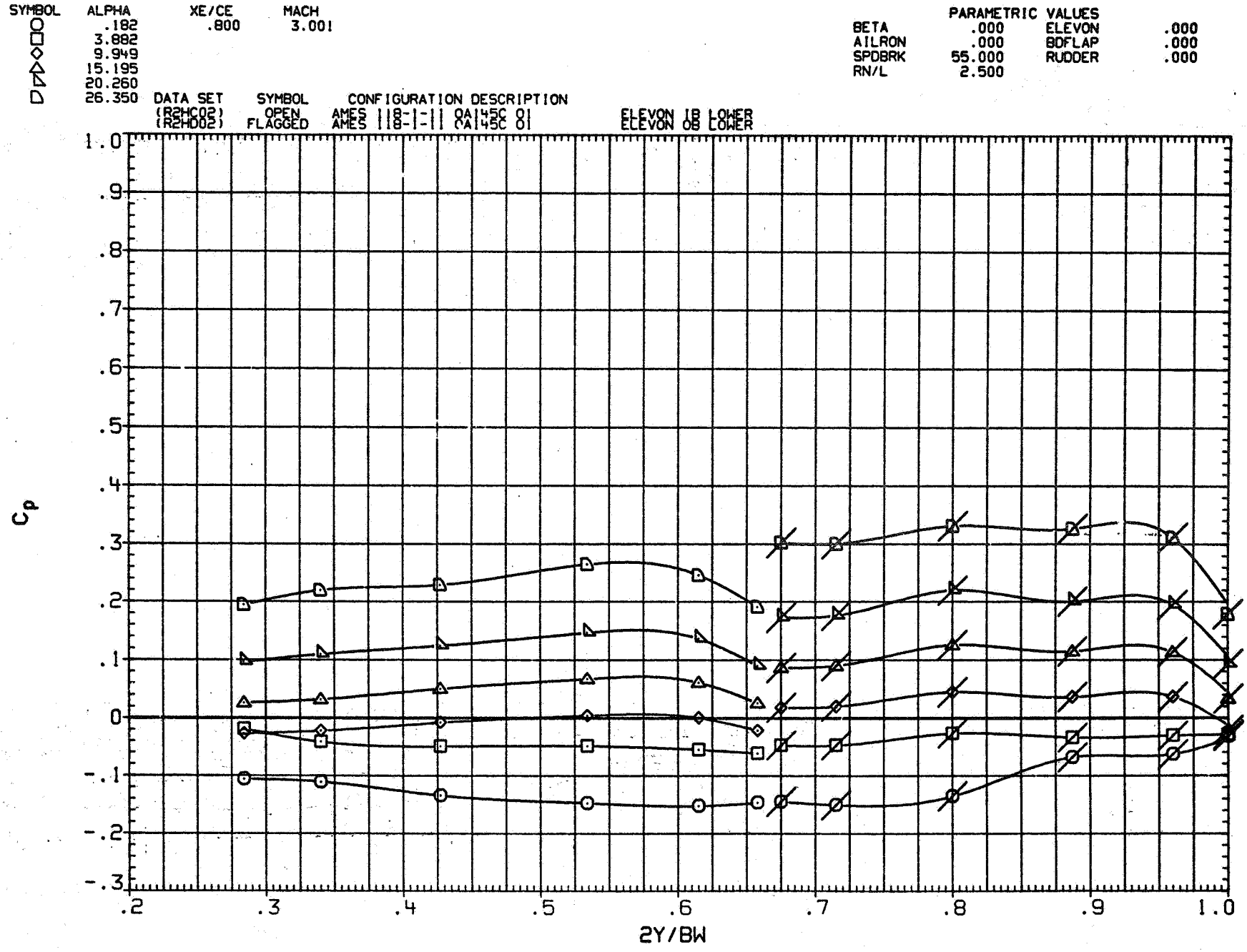


FIG.78 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

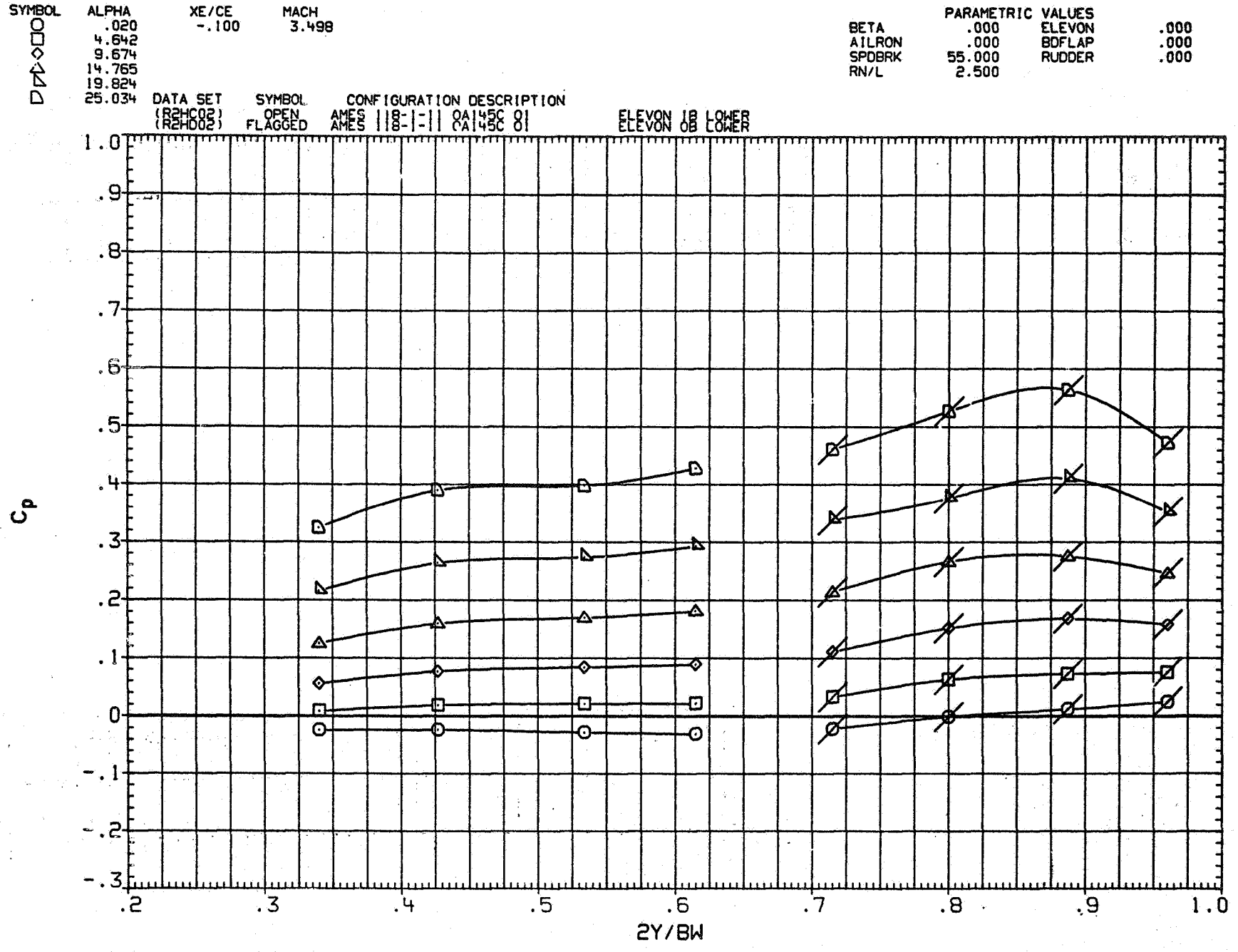


FIG.78 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

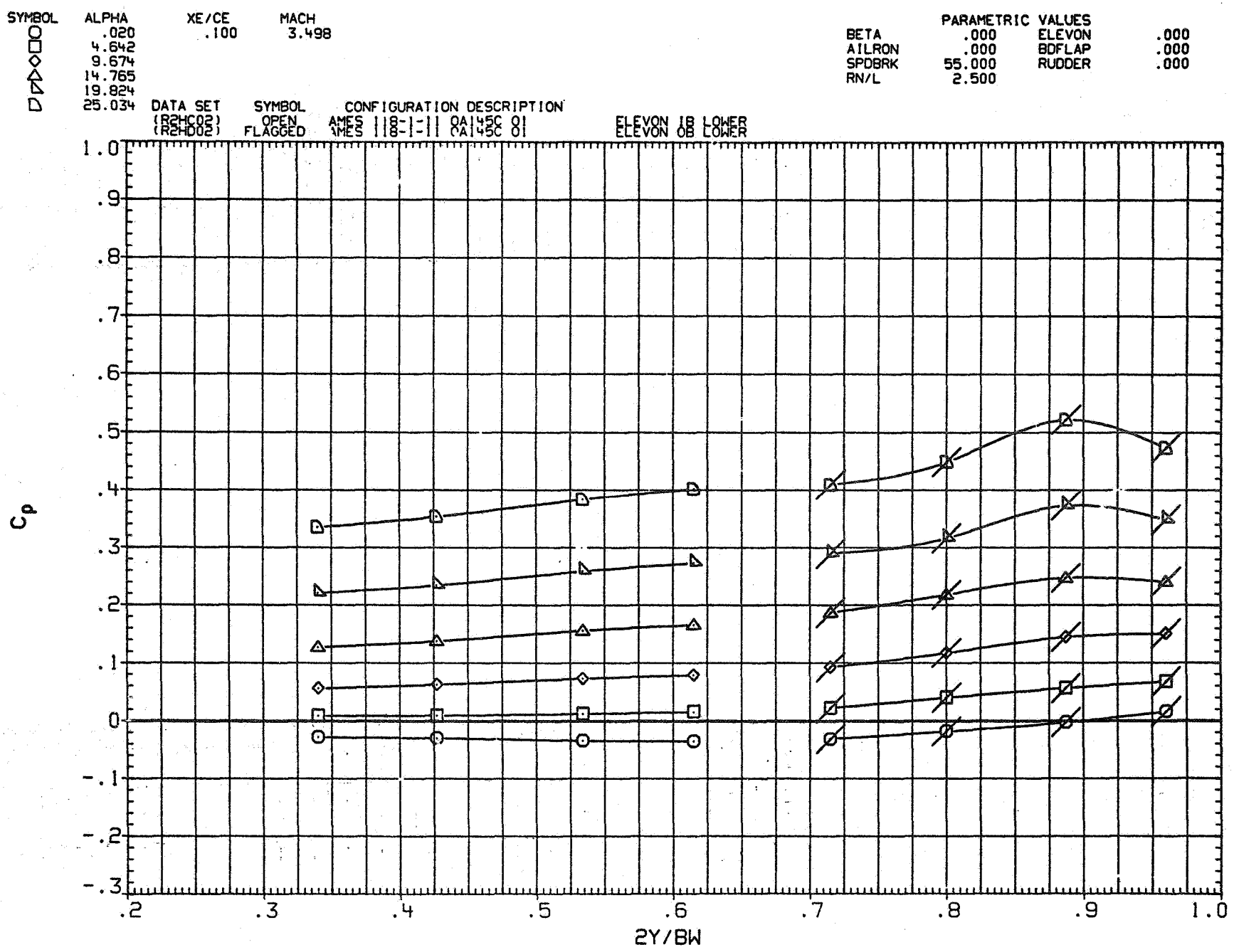


FIG.78 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

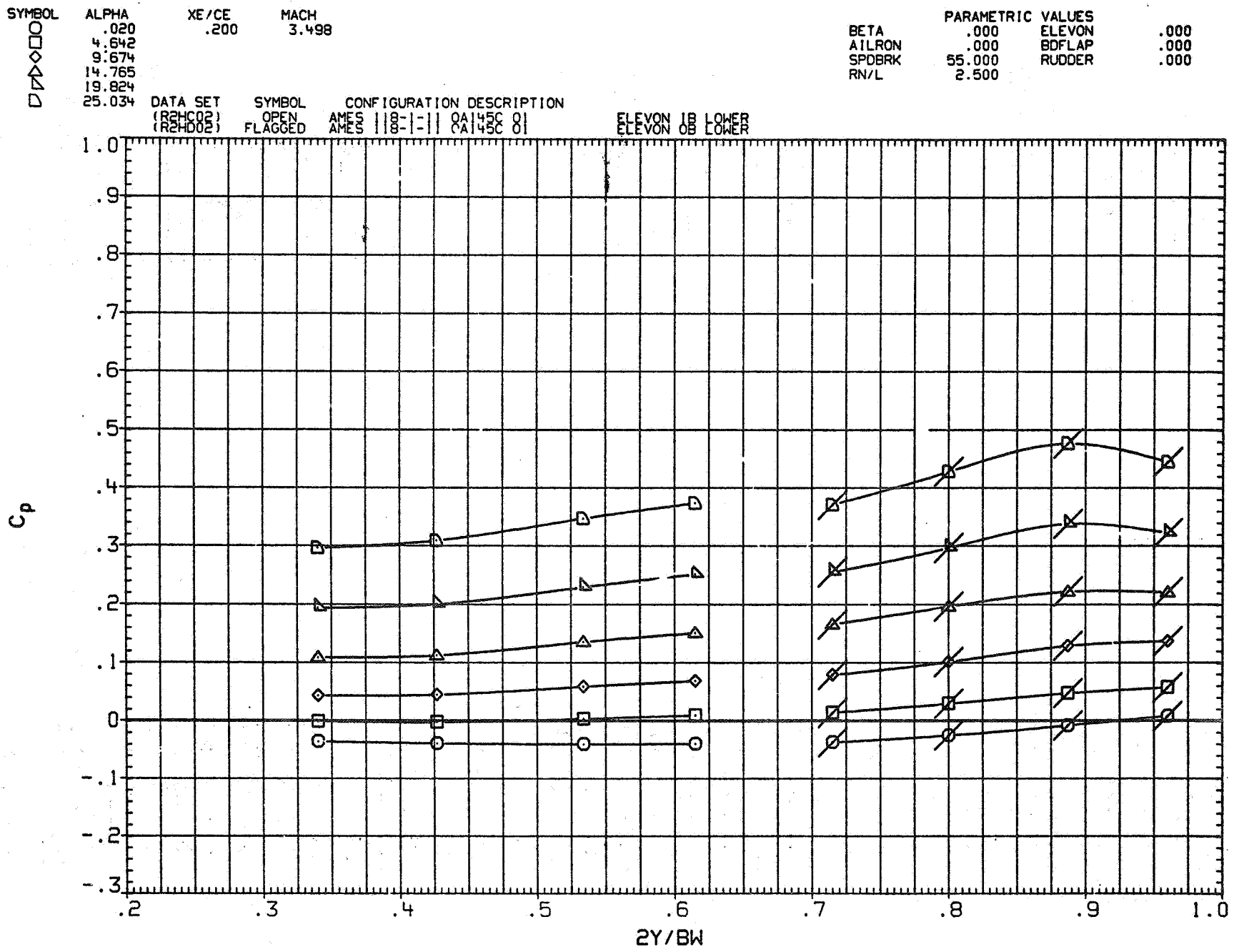


FIG.78 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

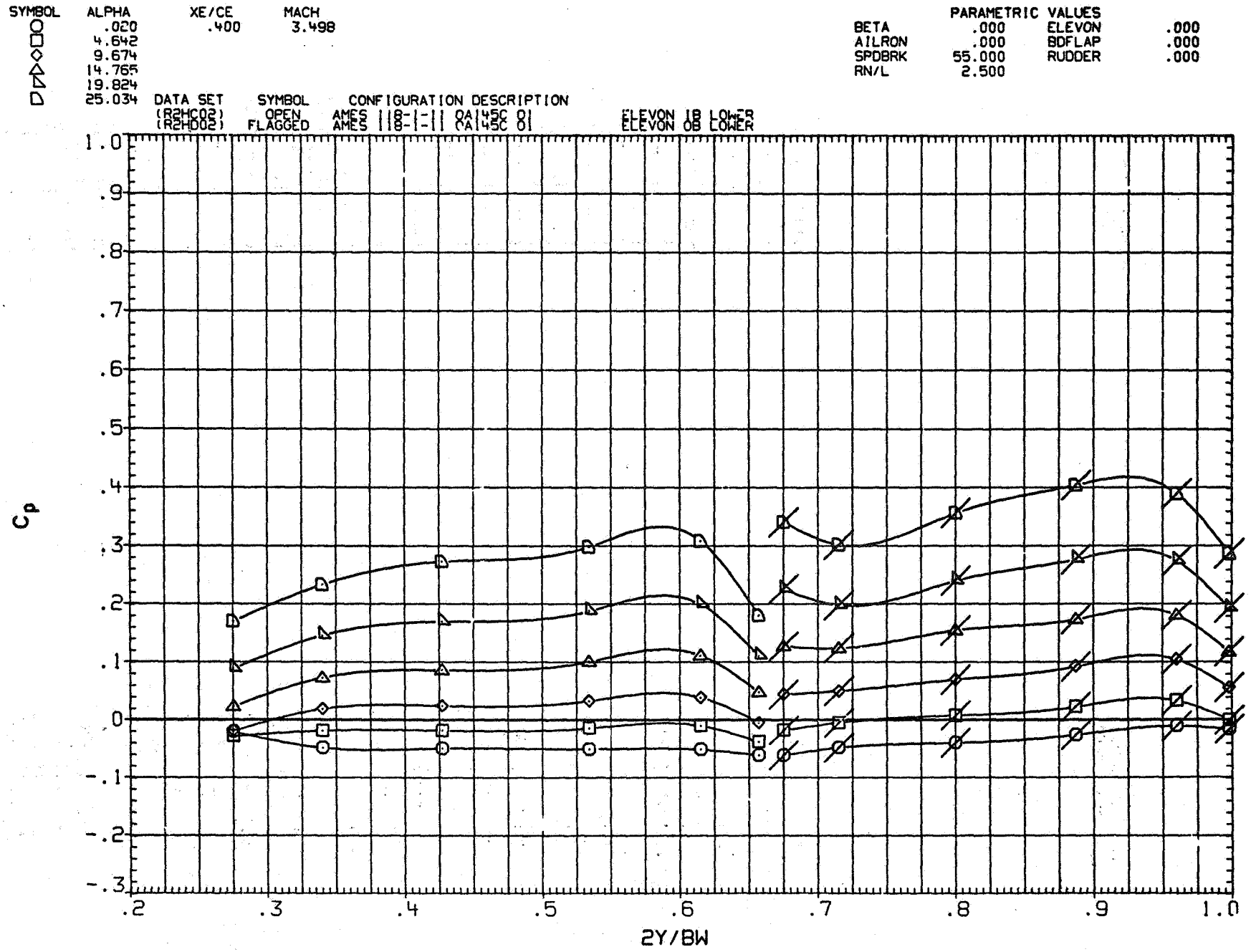


FIG.78 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

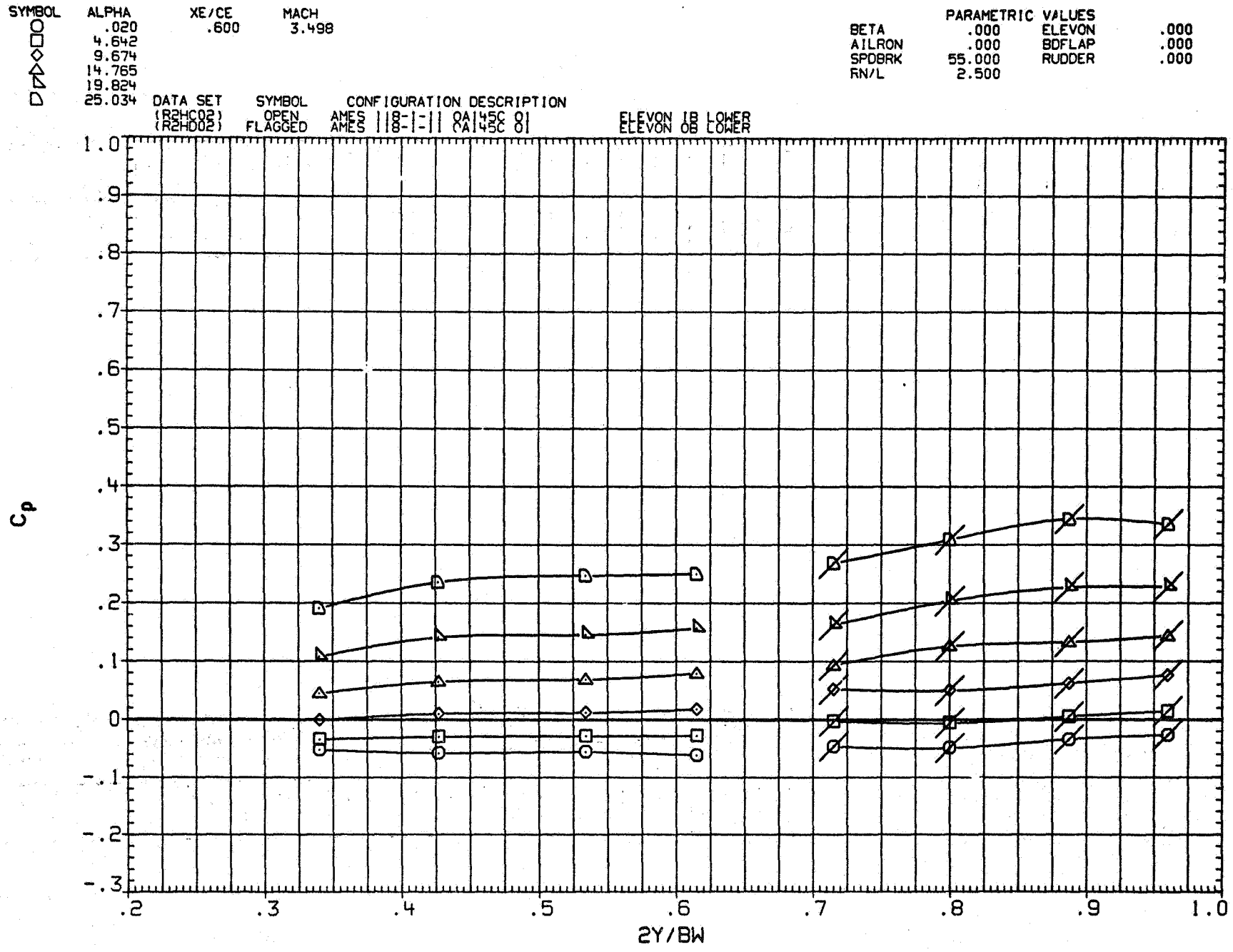


FIG.78 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

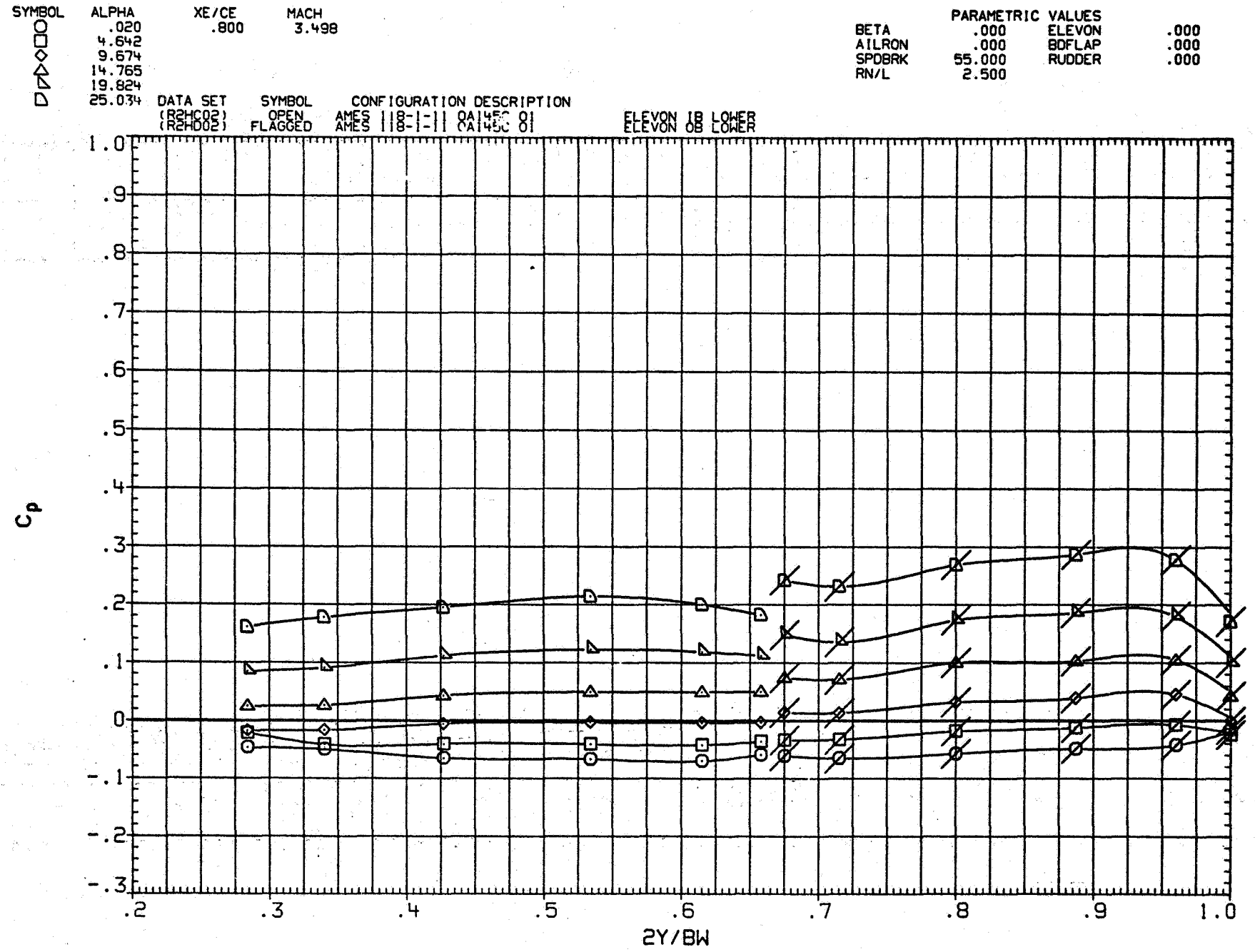


FIG.78 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 0

SYMBOL	ELEVON	XE/CE	MACH
○	-14.938	-.100	2.493
□	-9.941		
◇	-4.920		
△	.028		
◁	5.036		
D	10.016		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(R2HC20)	OPEN	AMES 18-T-11 OA145C 01 ELEVON 1B LOWER
(R2HD20)	FLAGGED	AMES 18-T-11 OA145C 01 ELEVON 0B LOWER

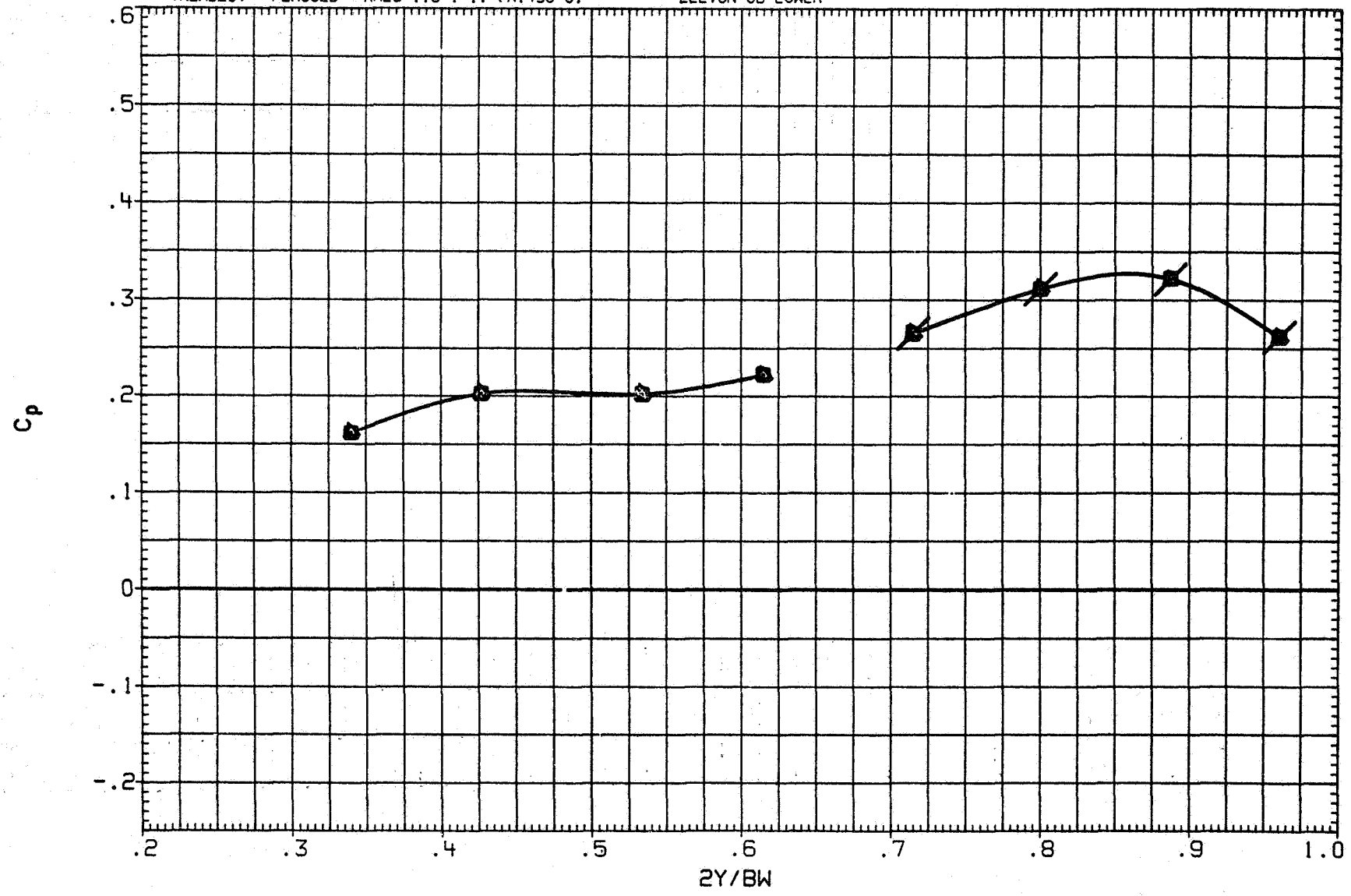


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

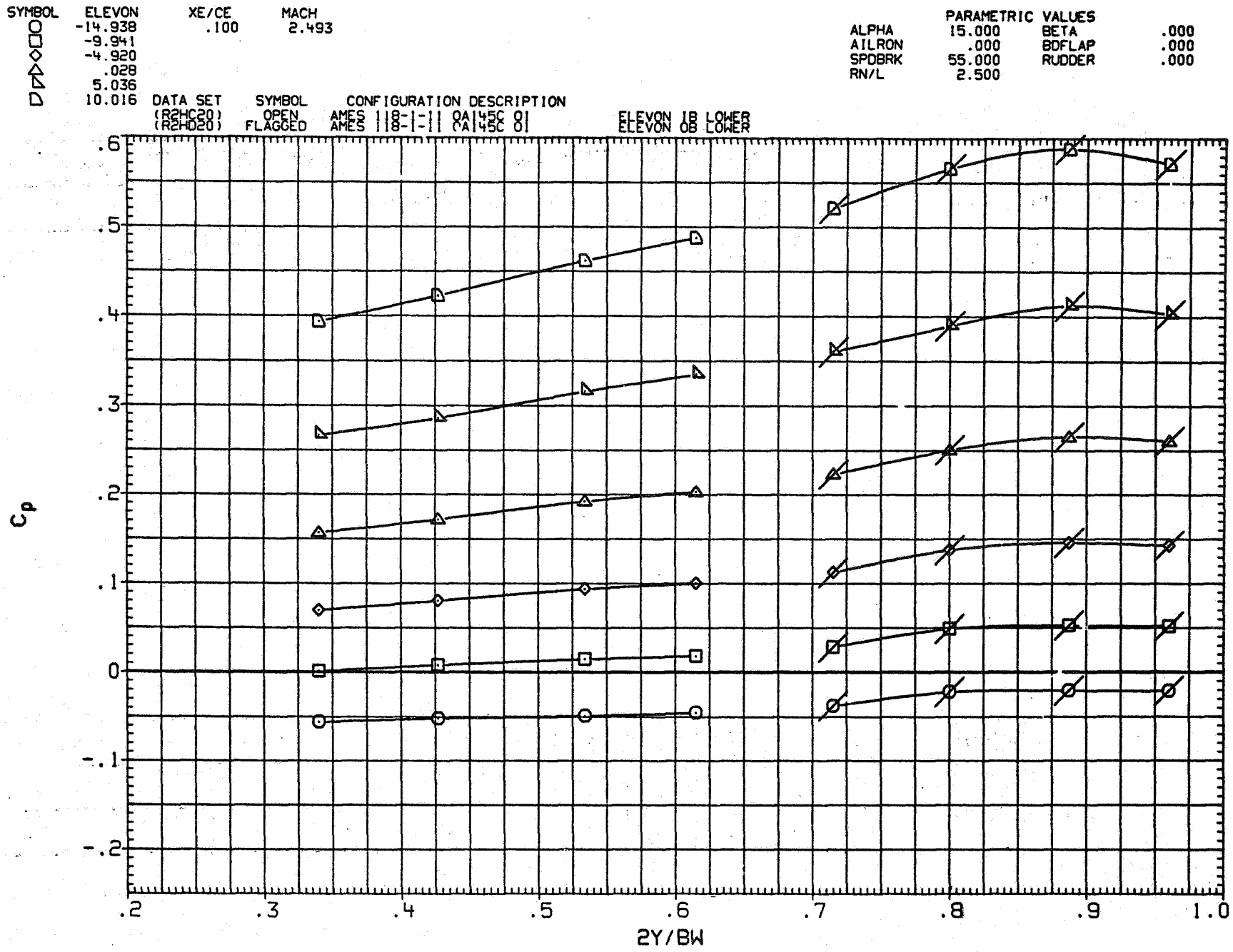


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

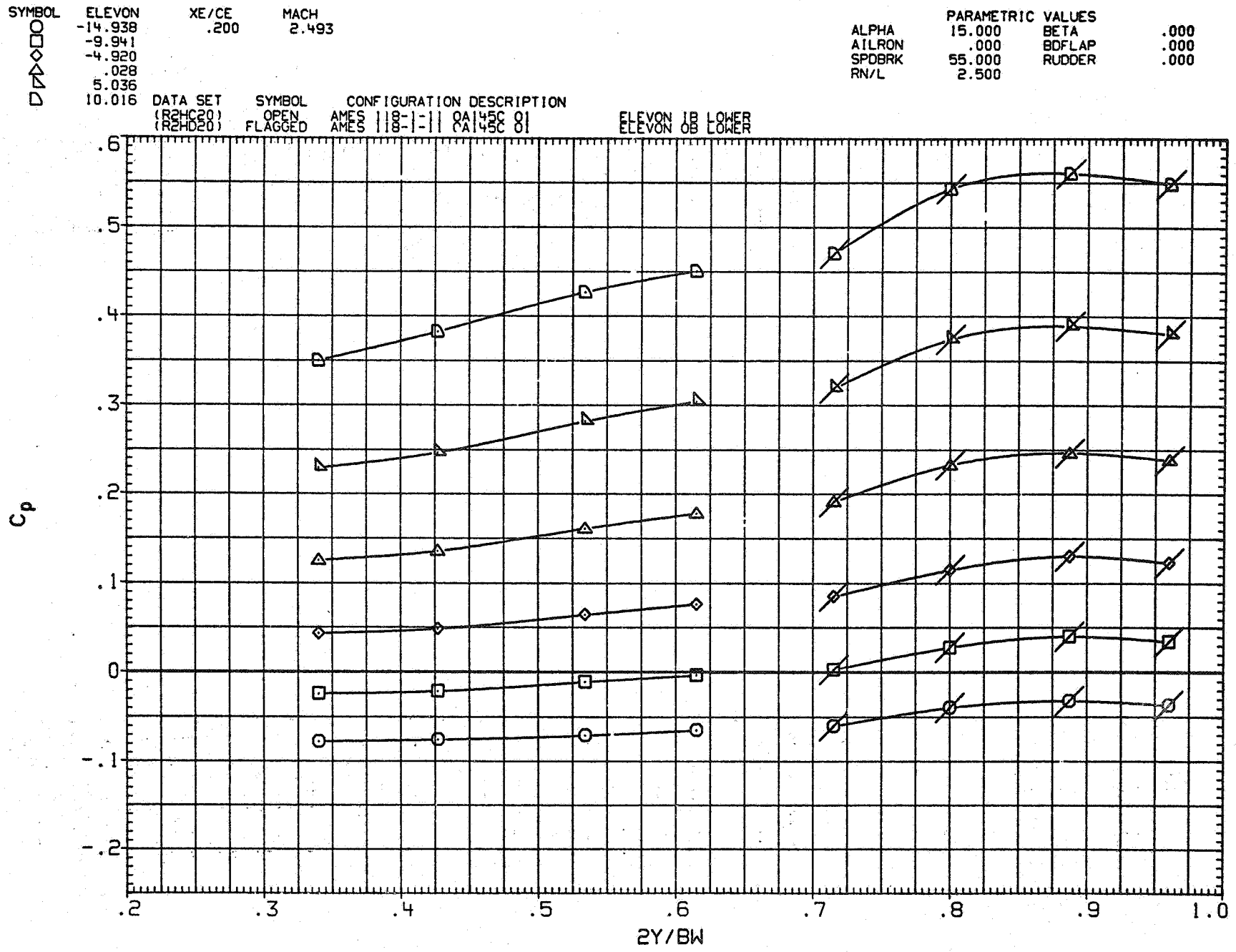


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

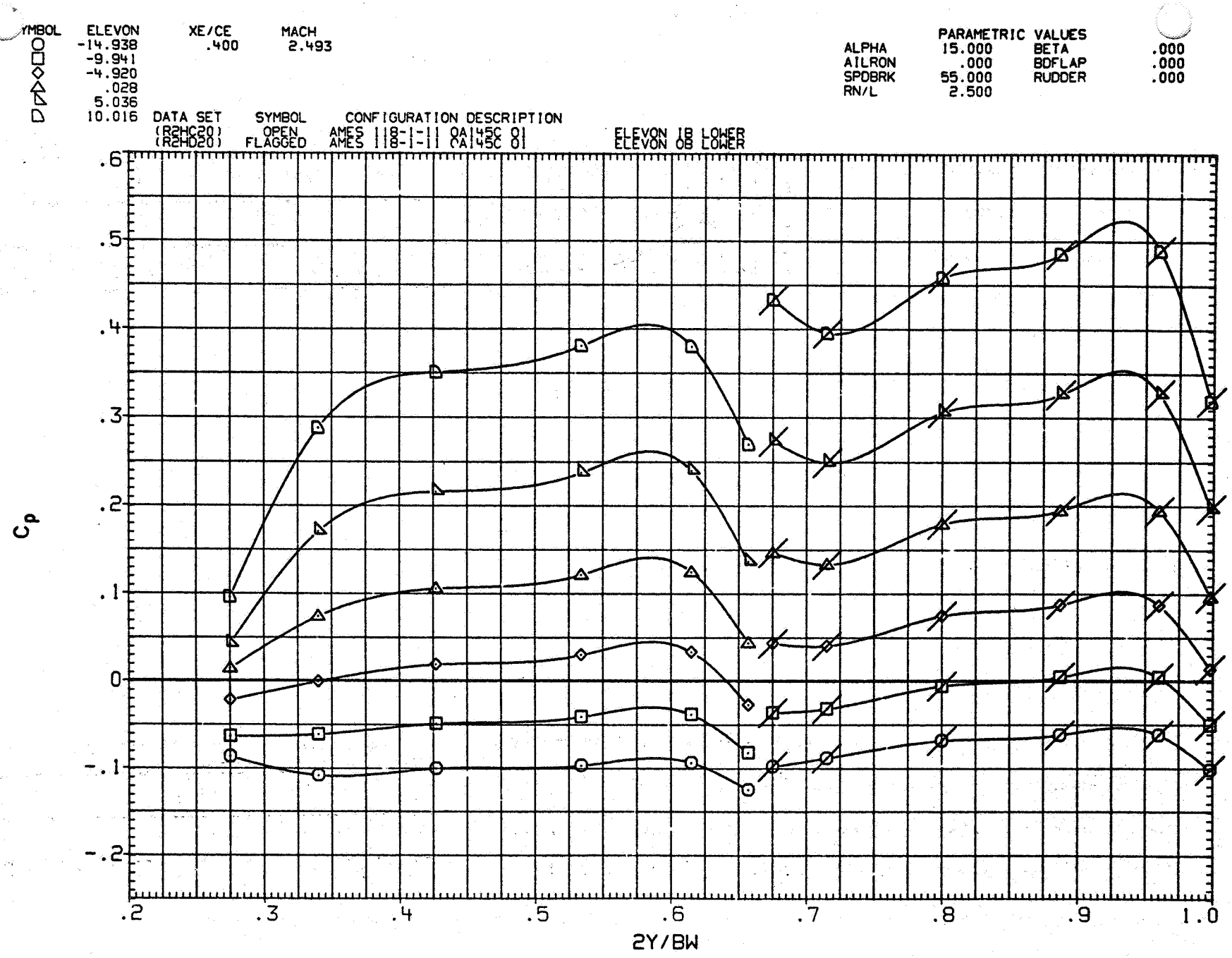


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

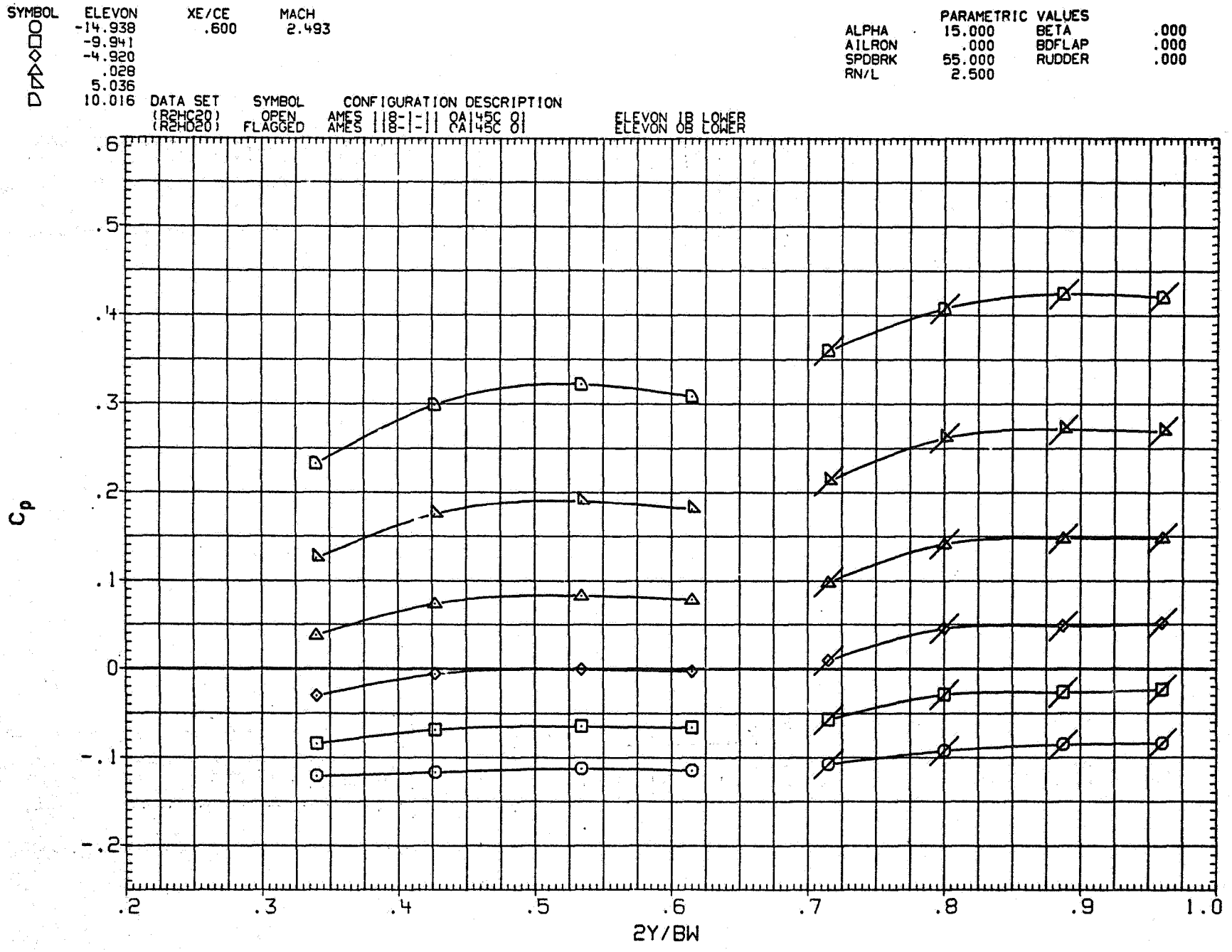


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

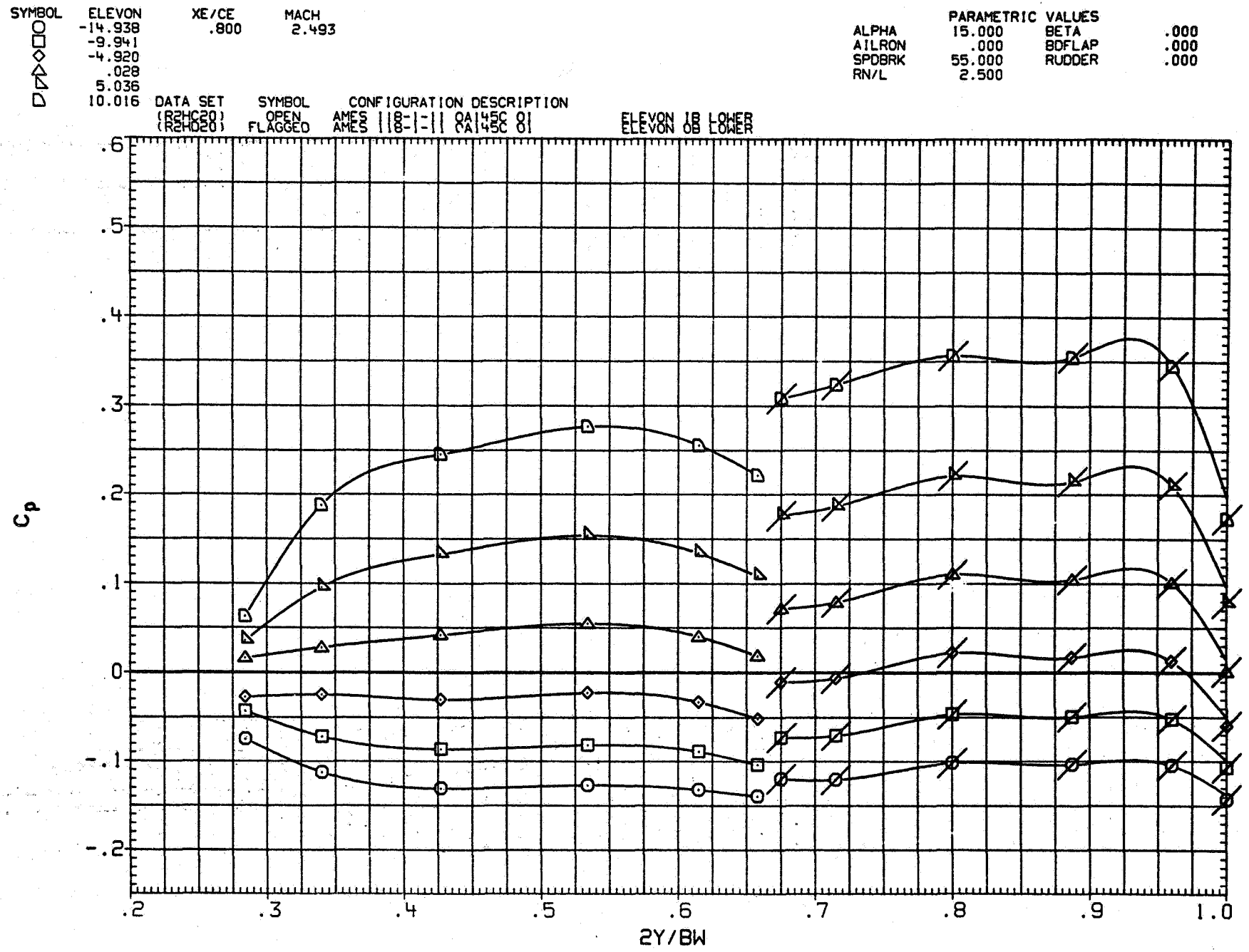


FIG.79 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

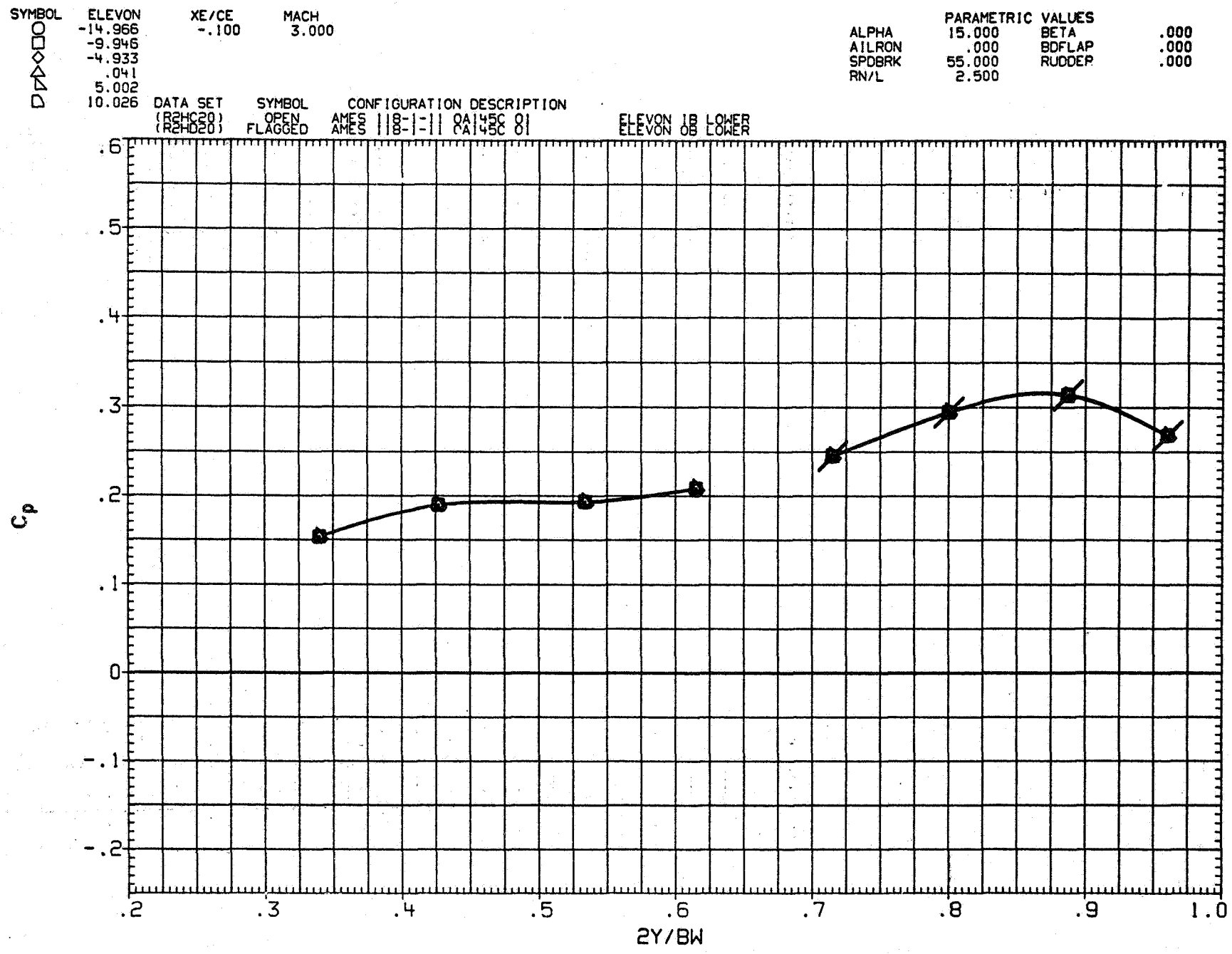


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15.

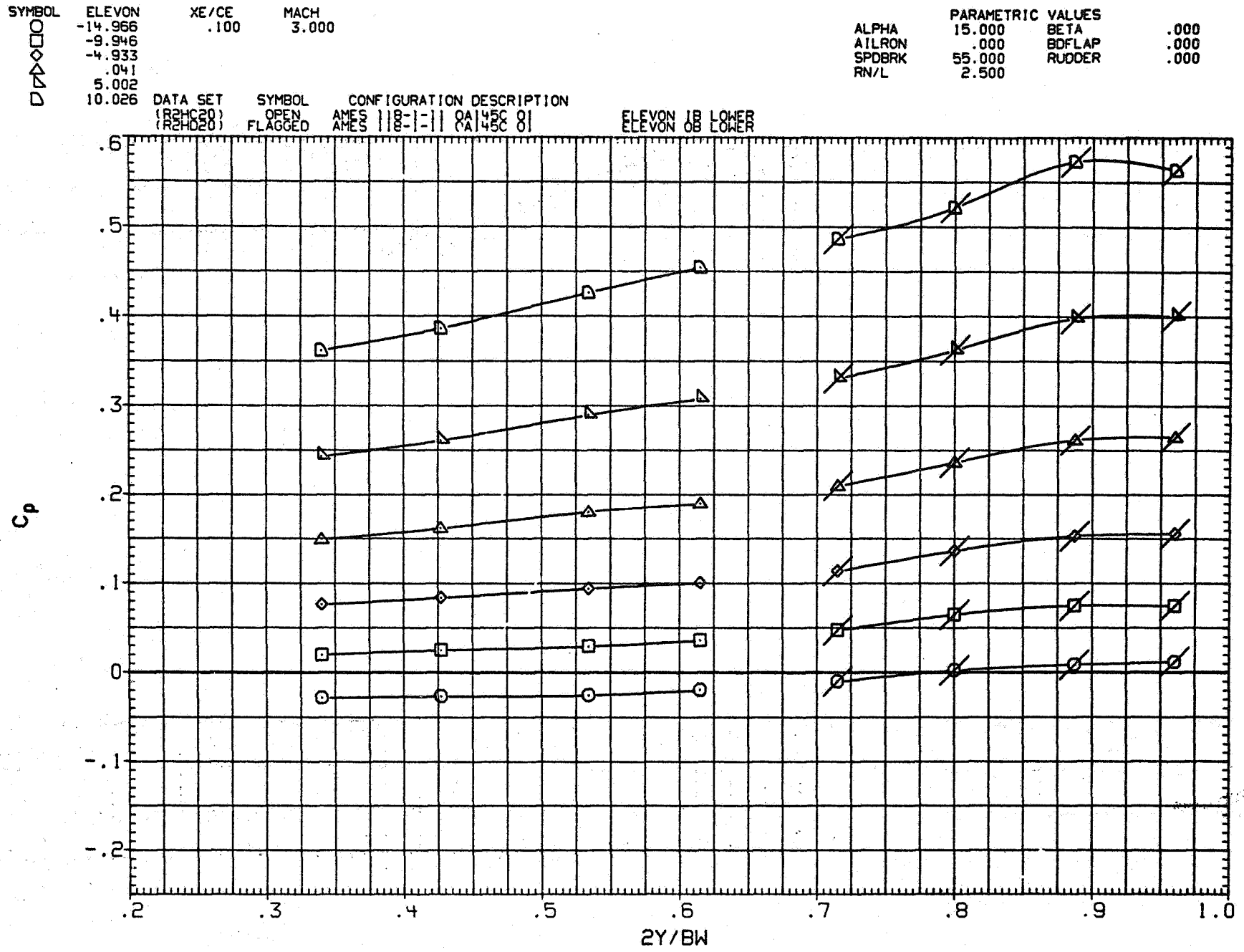


FIG.79 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

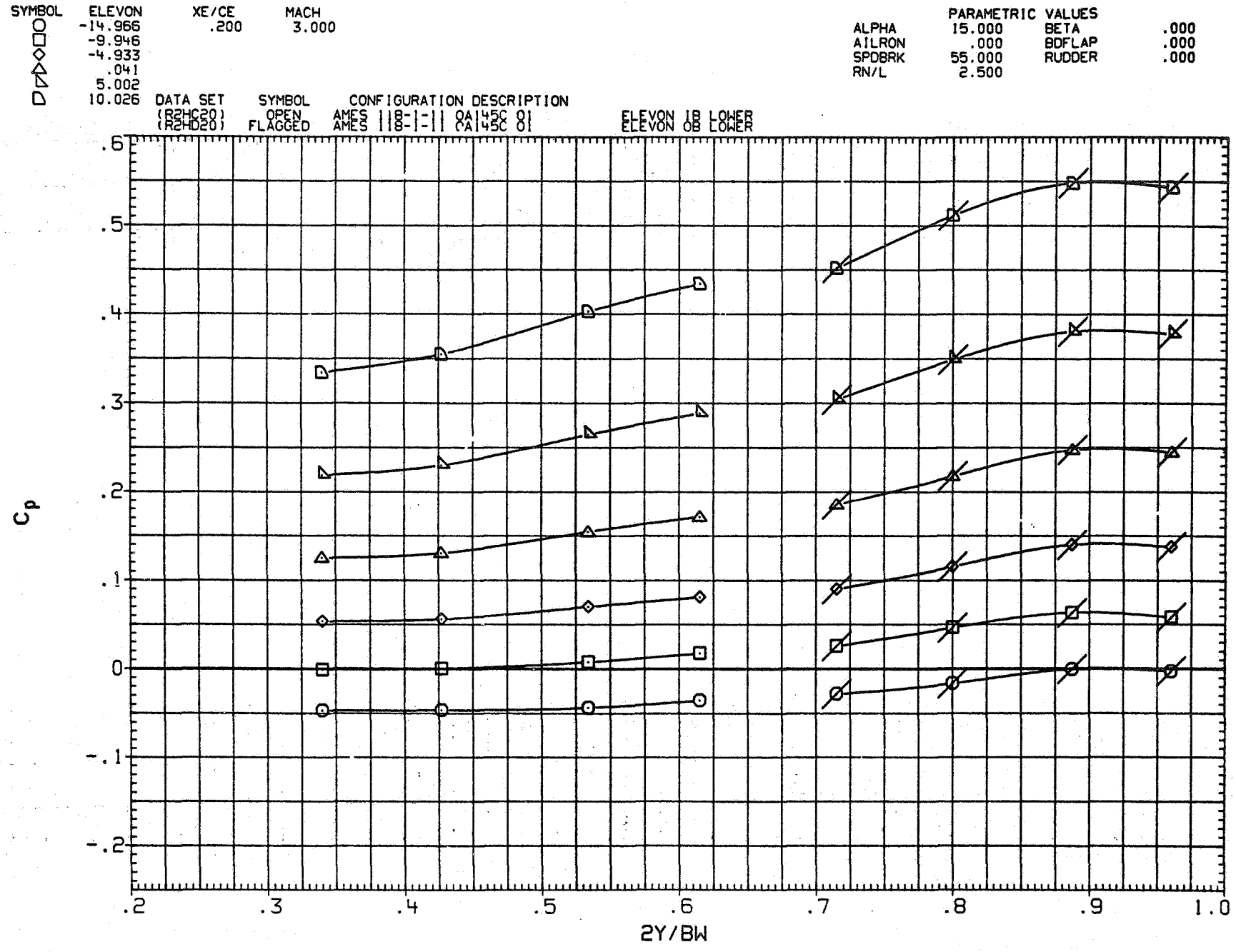


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

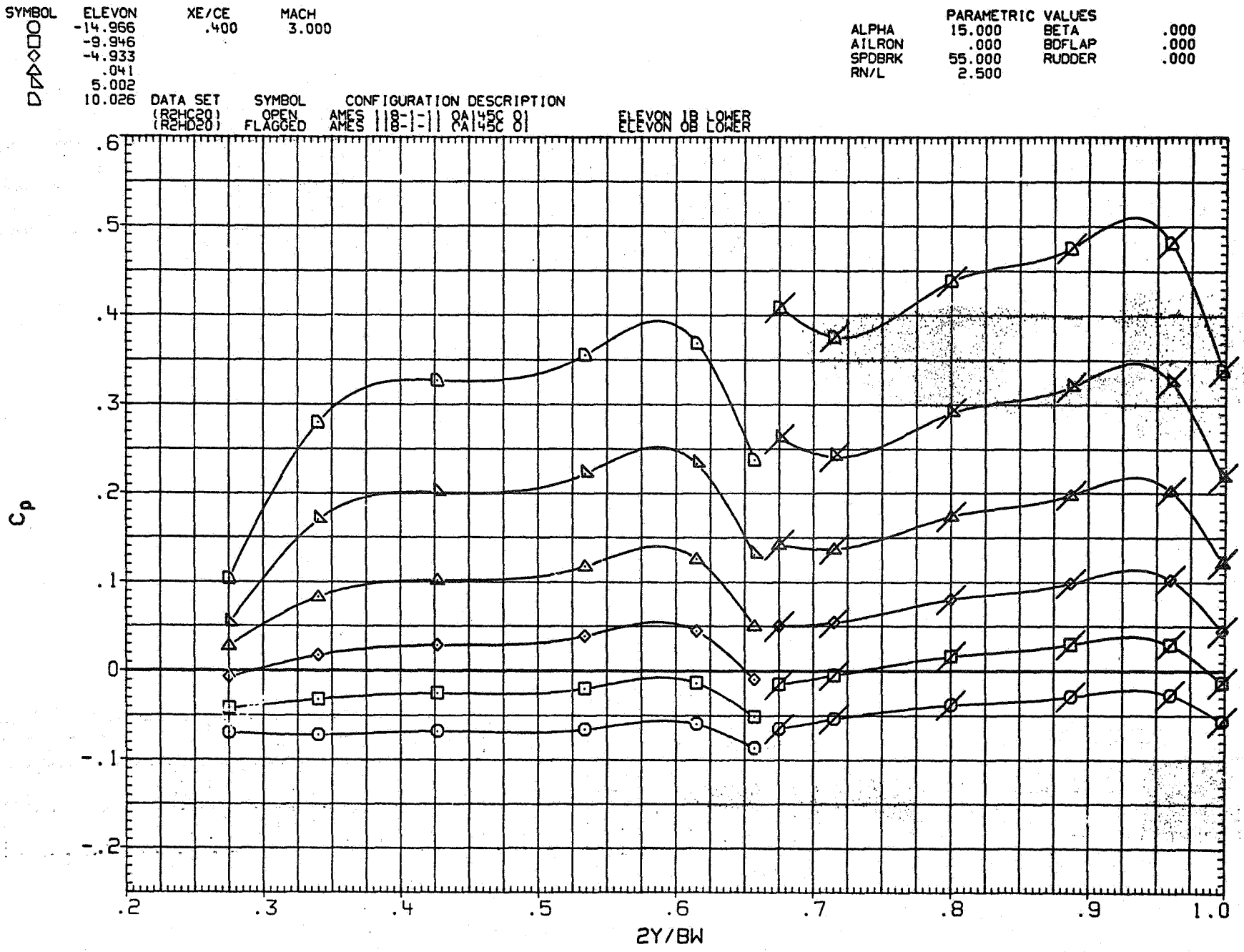


FIG.79 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

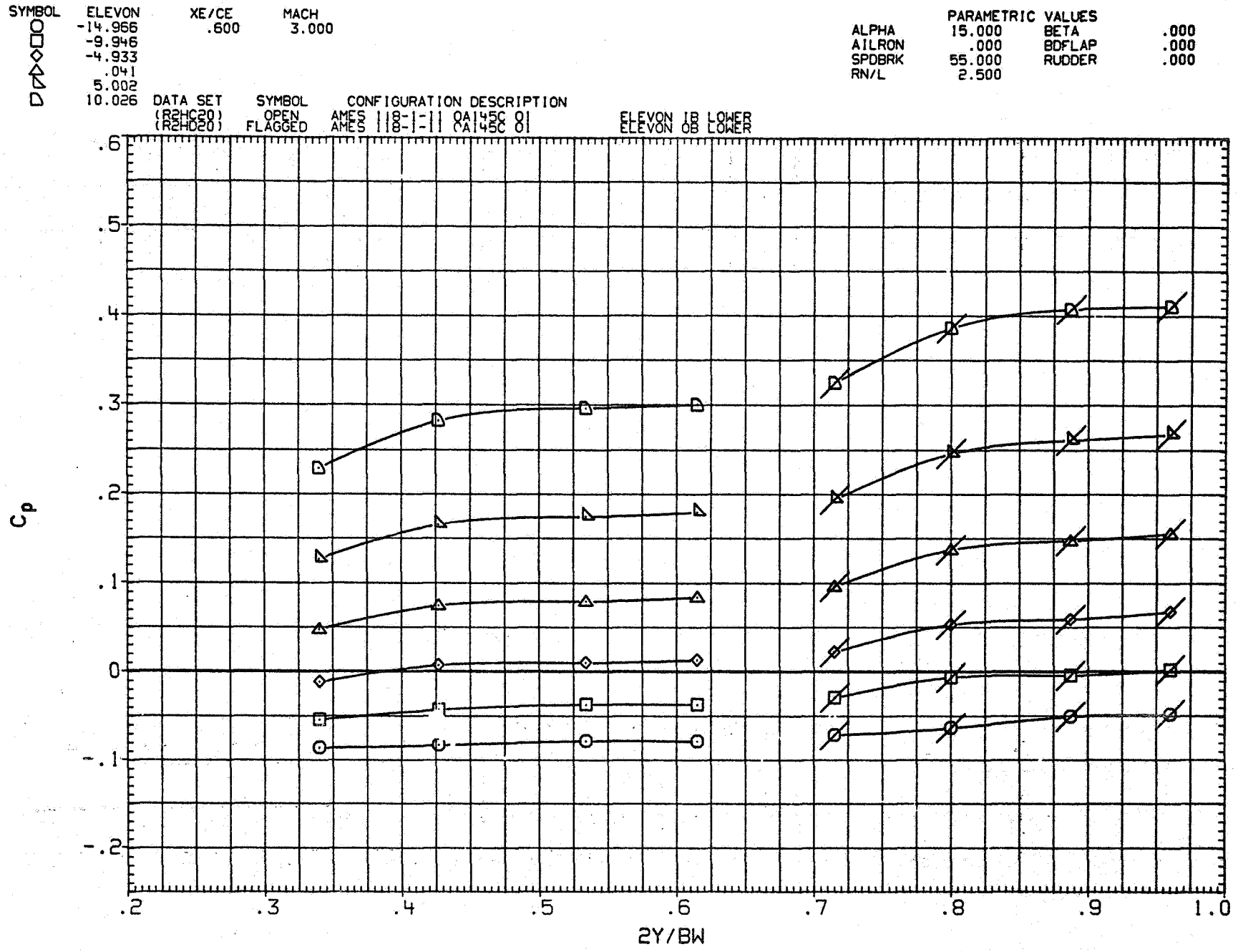


FIG.79 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

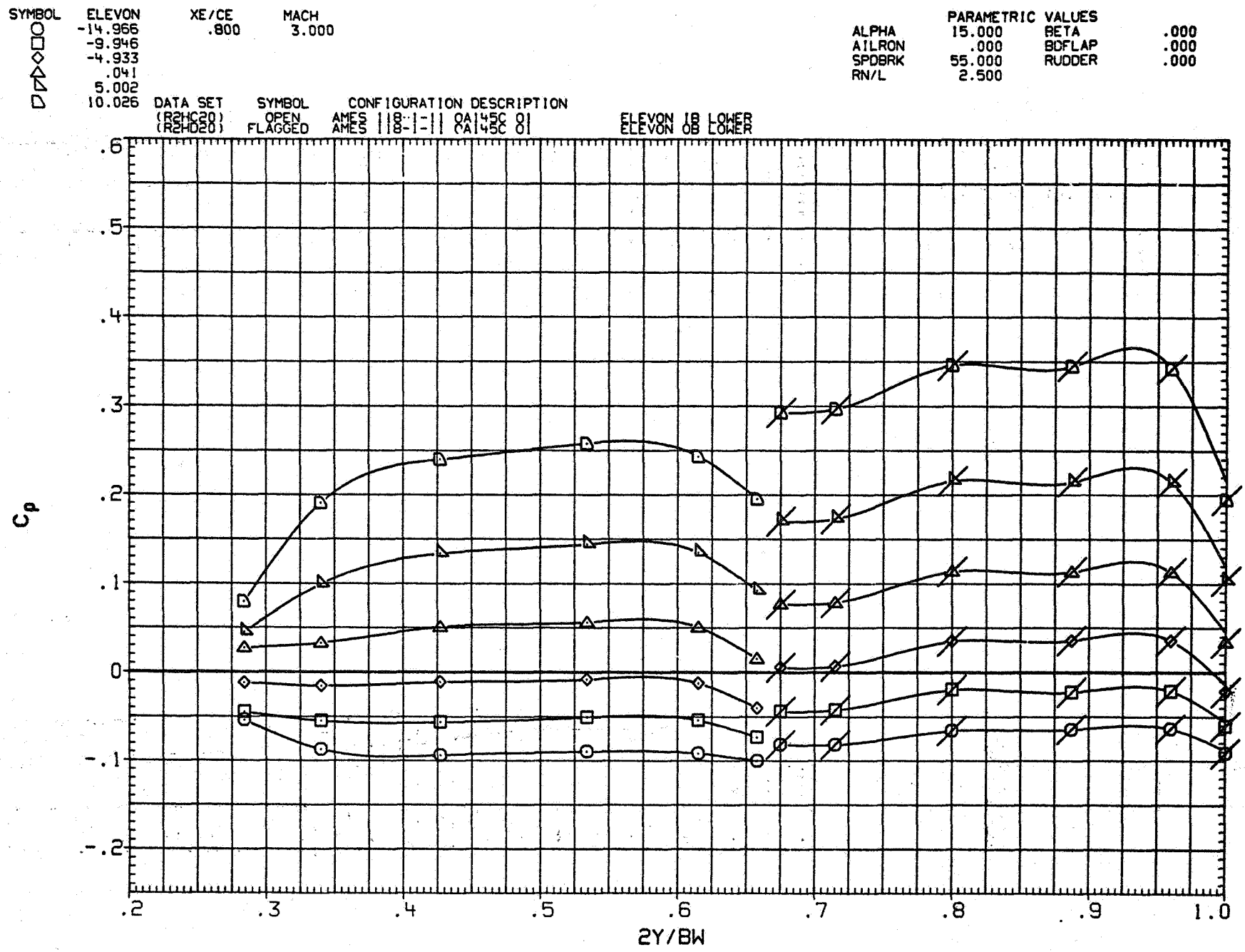


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

SYMBOL	ELEVON	XE/CE	MACH
○	-14.935	-.100	3.498
□	-9.941		
◇	-4.943		
△	.029		
▽	5.039		
◁	10.019		

PARAMETRIC VALUES			
ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(R2HC20)	OPEN	AMES 11 8-1-11 0A145C 01 ELEVON IB LOWER
(R2HD20)	FLAGGED	AMES 11 8-1-11 0A145C 01 ELEVON OB LOWER

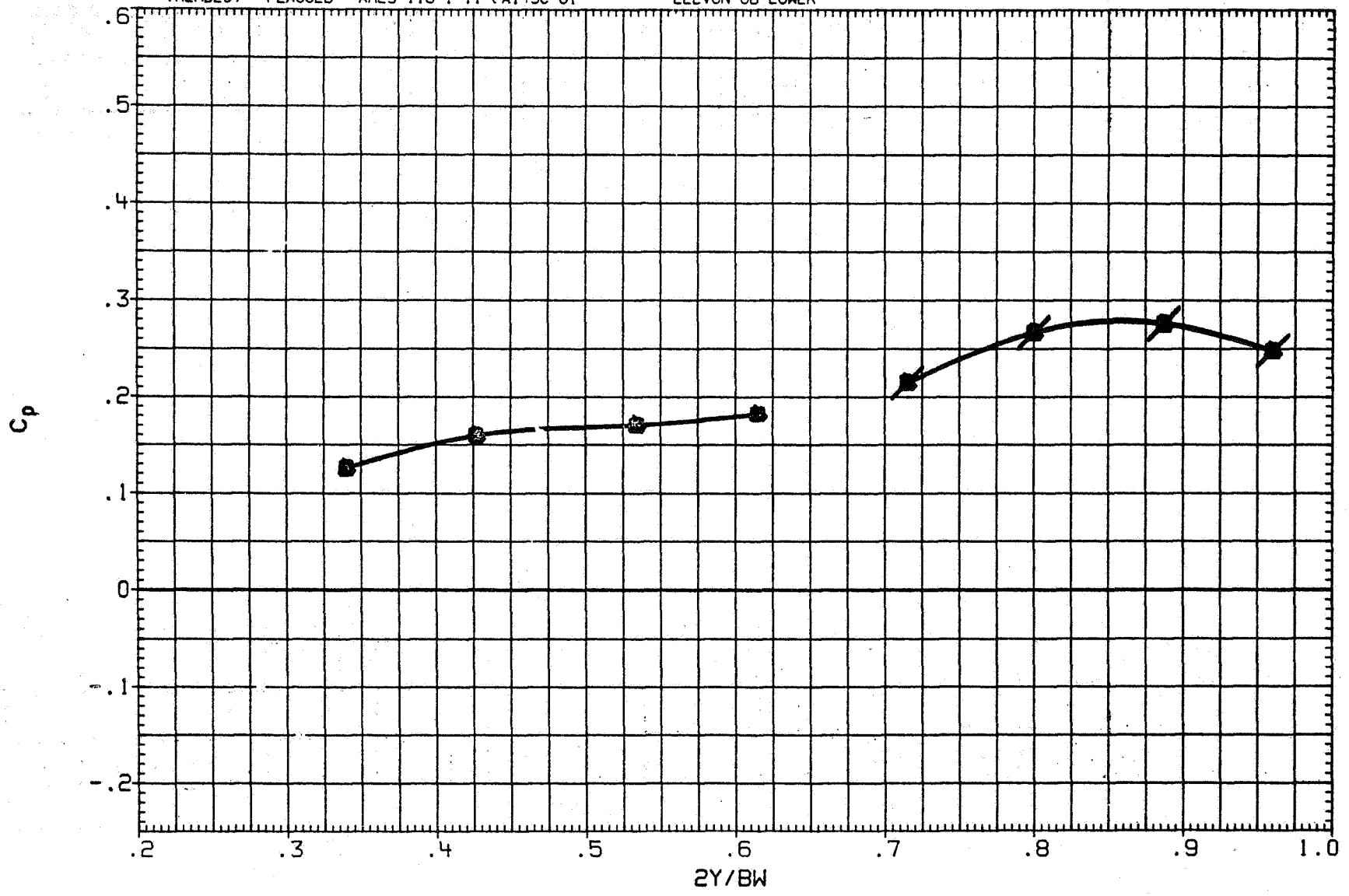


FIG.79 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

SYMBOL	ELEVON	XE/CE	MACH
○	-14.935	.100	3.498
□	-9.941		
◇	-4.943		
△	.029		
◁	5.039		
D	10.019		

PARAMETRIC VALUES			
ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(R2HC20)	OPEN	AMES 18-T-11 0A145C 01 ELEVON IB LOWER
(R2HD20)	FLAGGED	AMES 18-T-11 0A145C 01 ELEVON OB LOWER

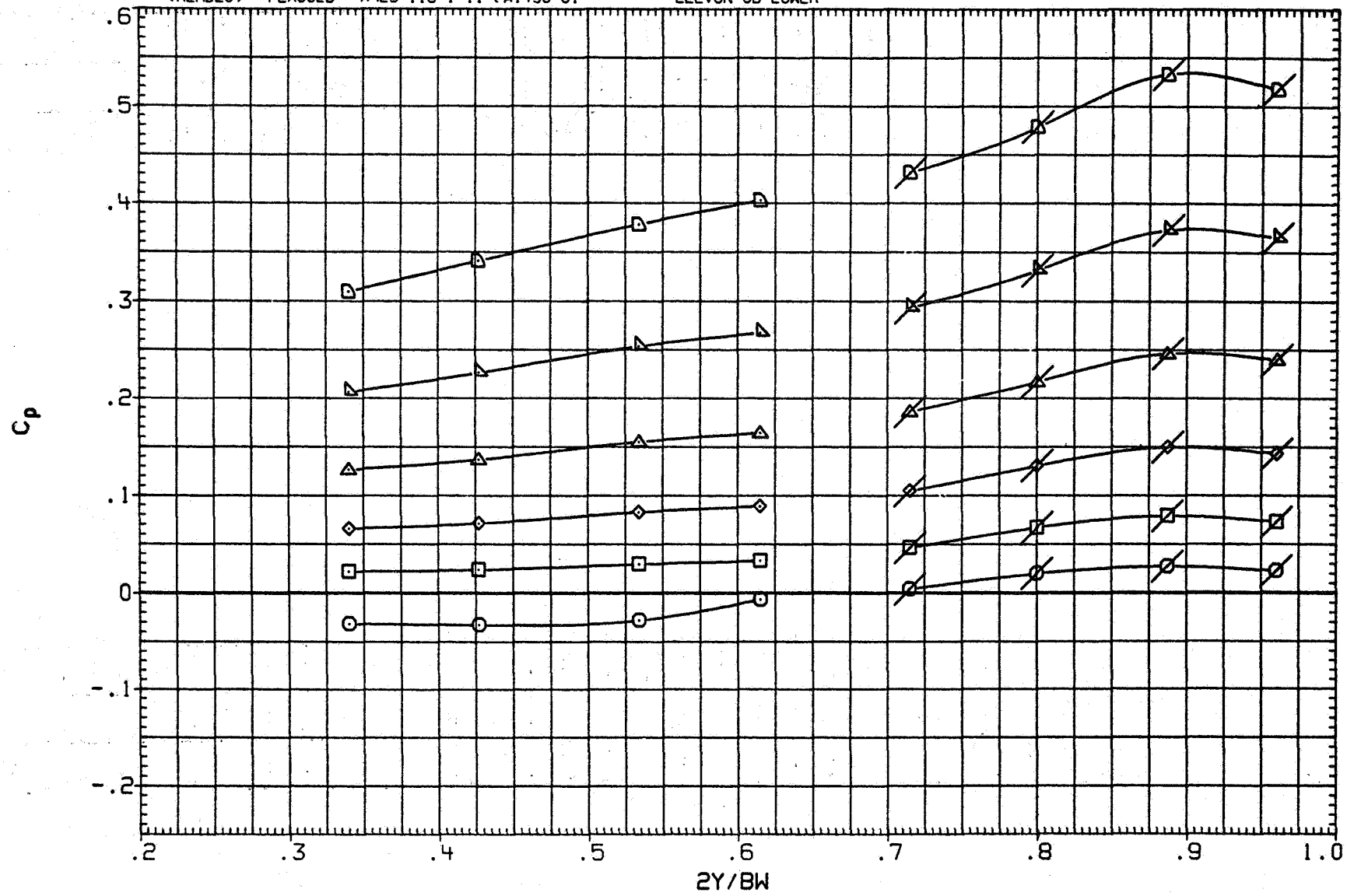


FIG.79 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

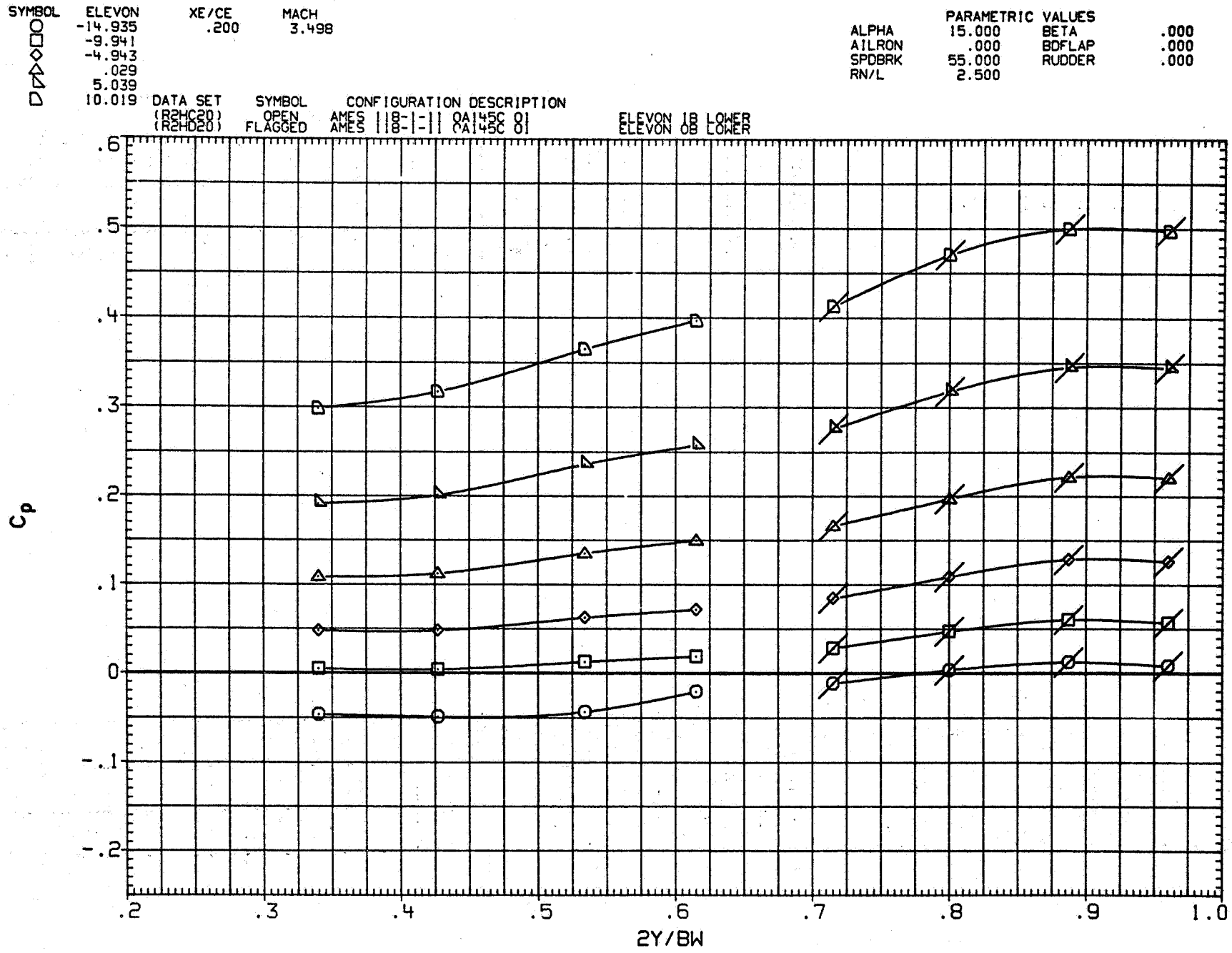


FIG.79 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

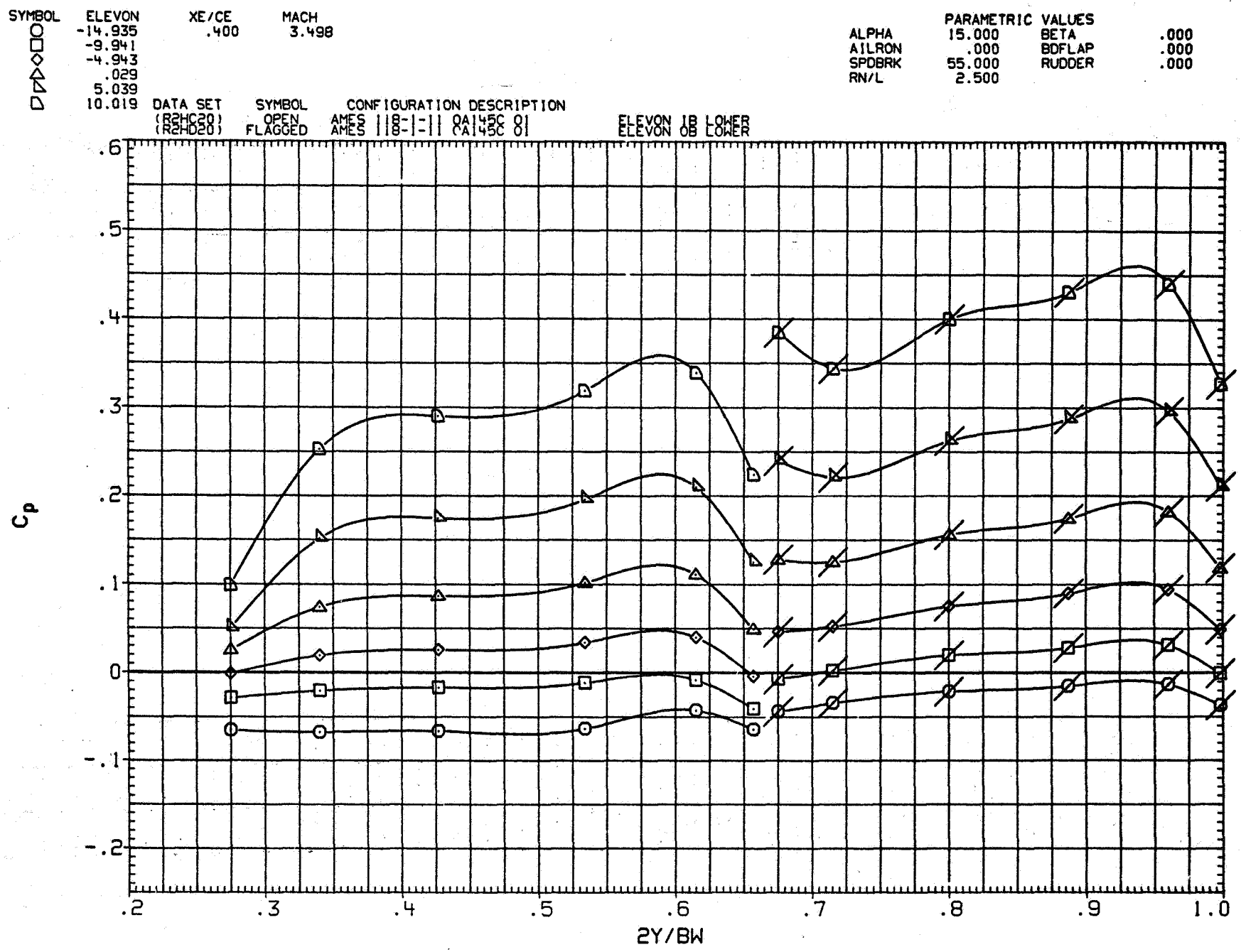


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

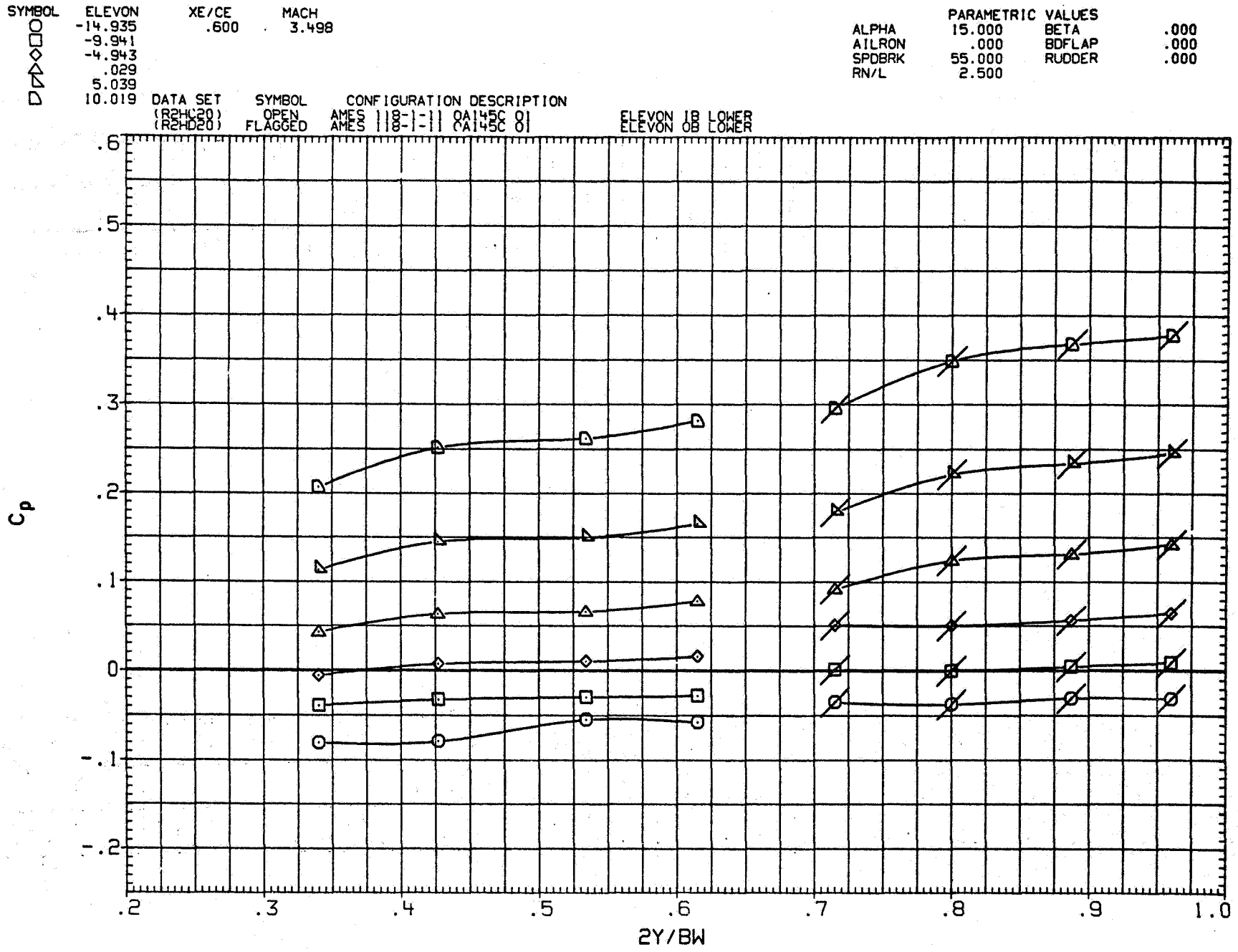


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

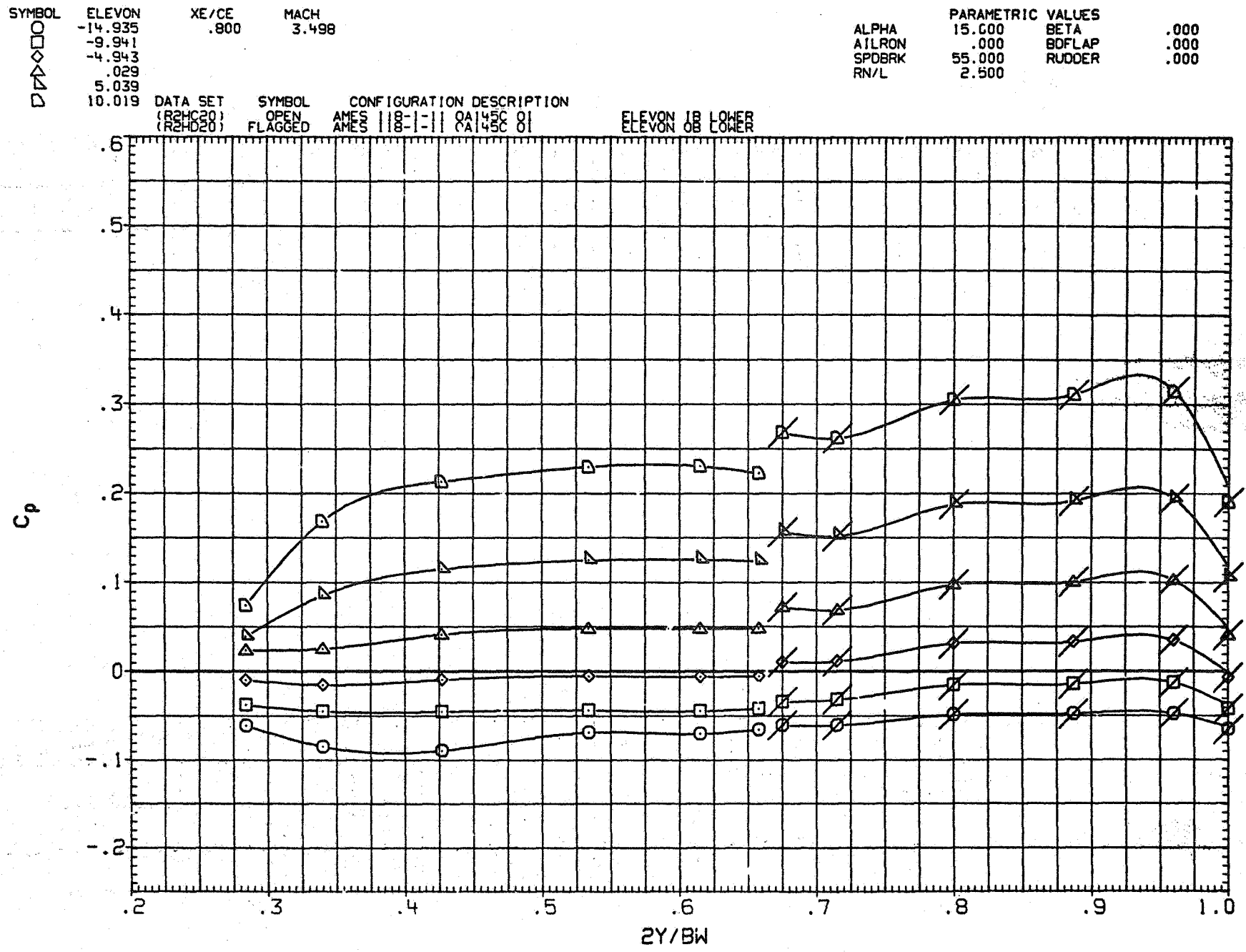


FIG.79 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ELEVON EFFECT AT ALPHA = 15

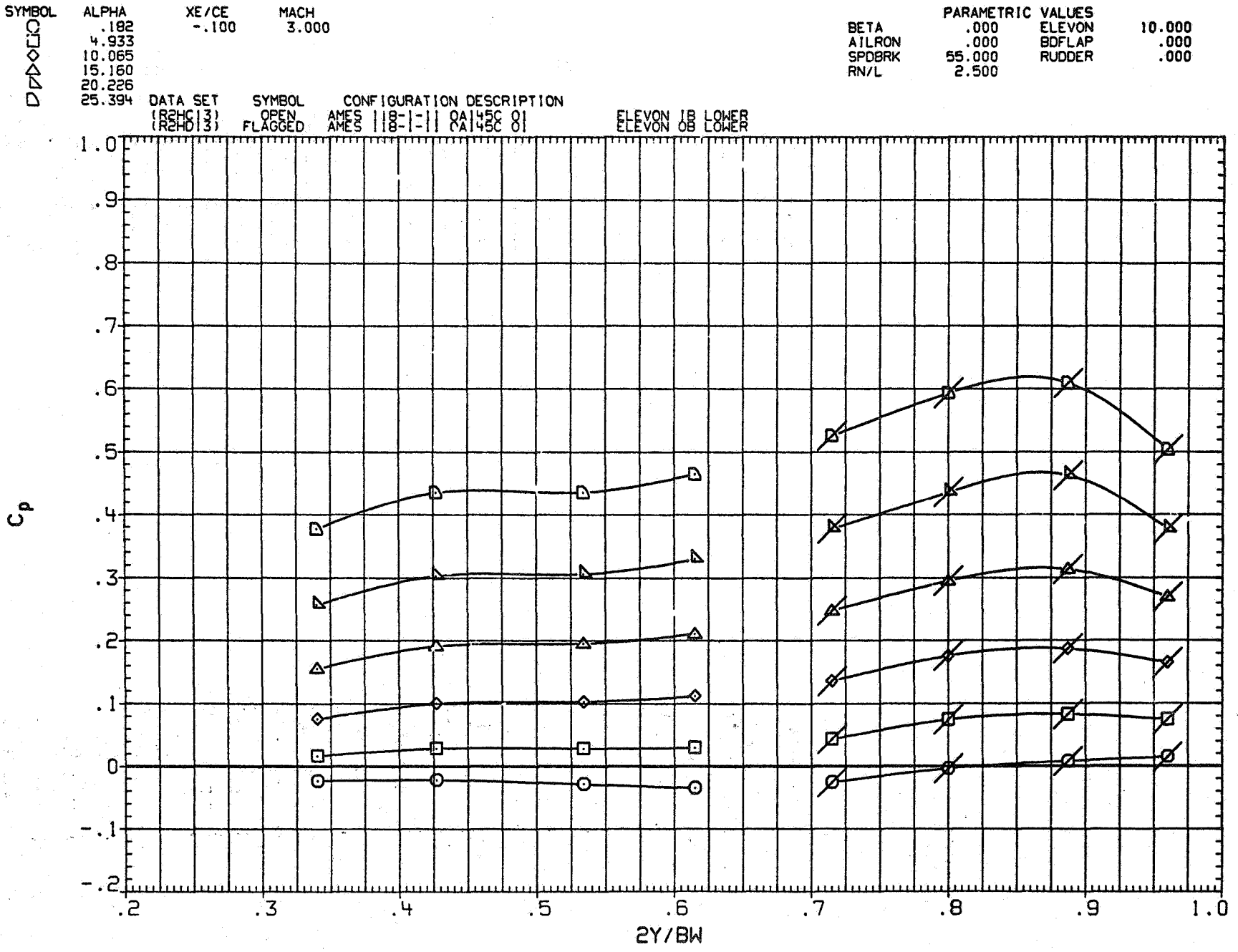


FIG.80 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

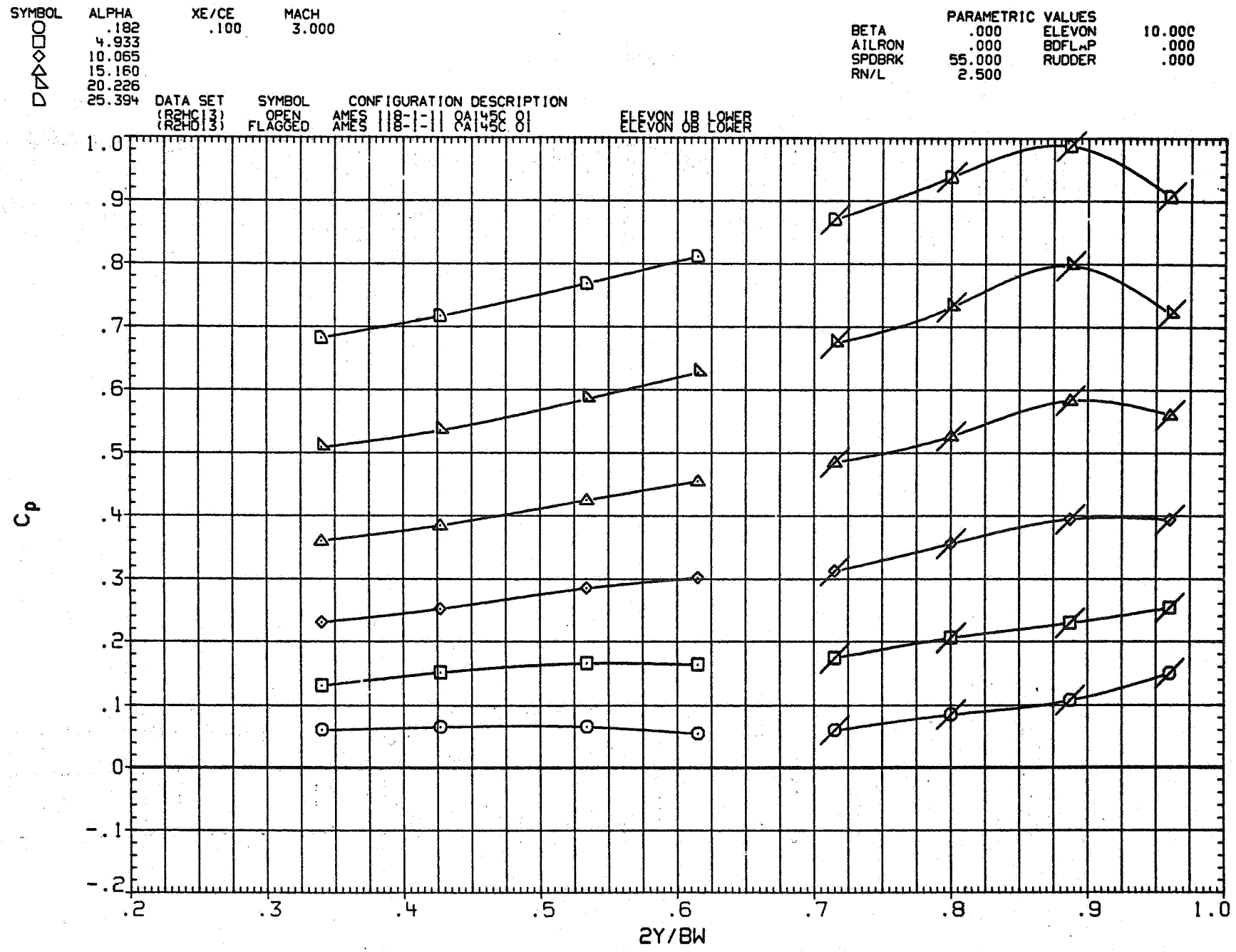


FIG.80 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

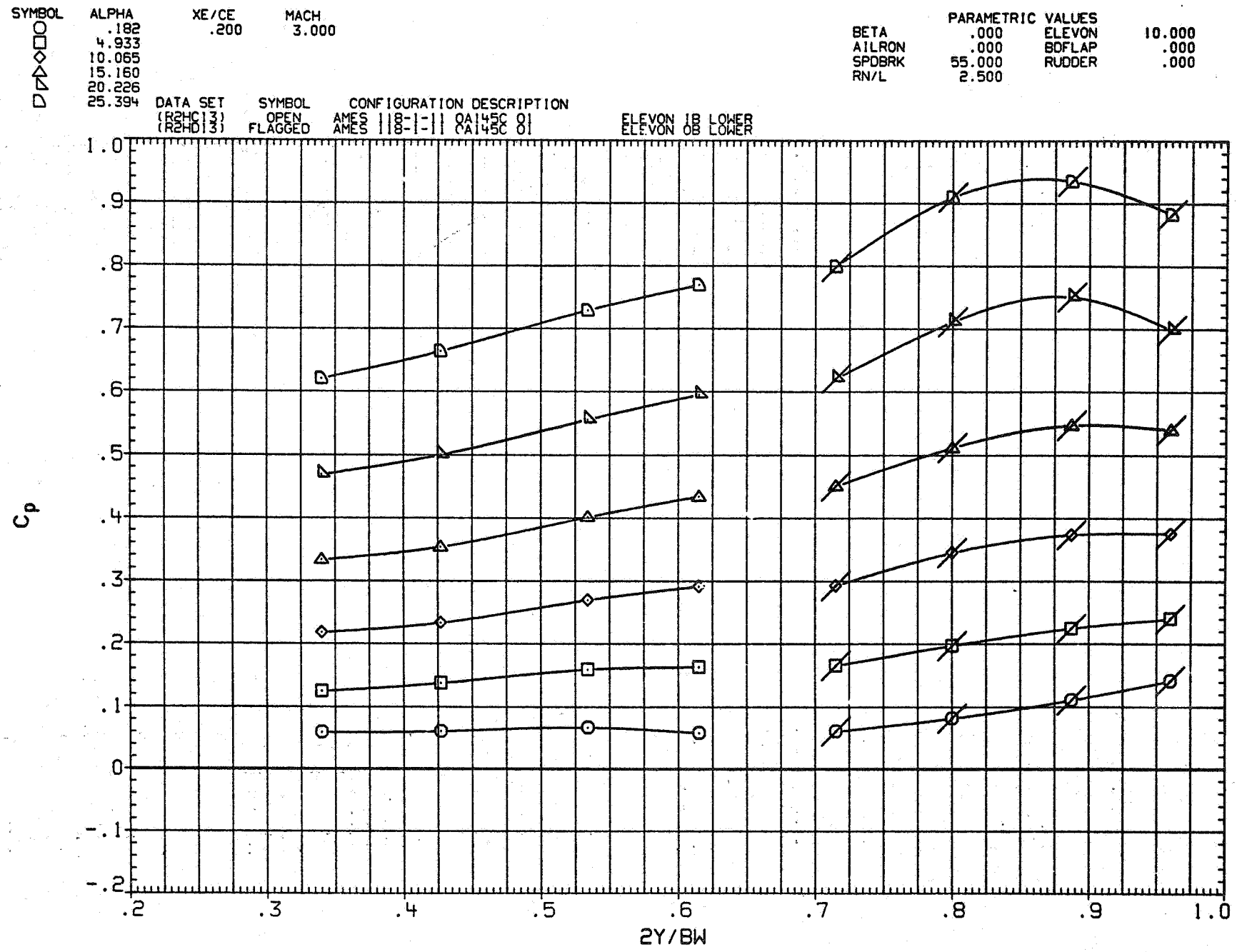


FIG.80 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

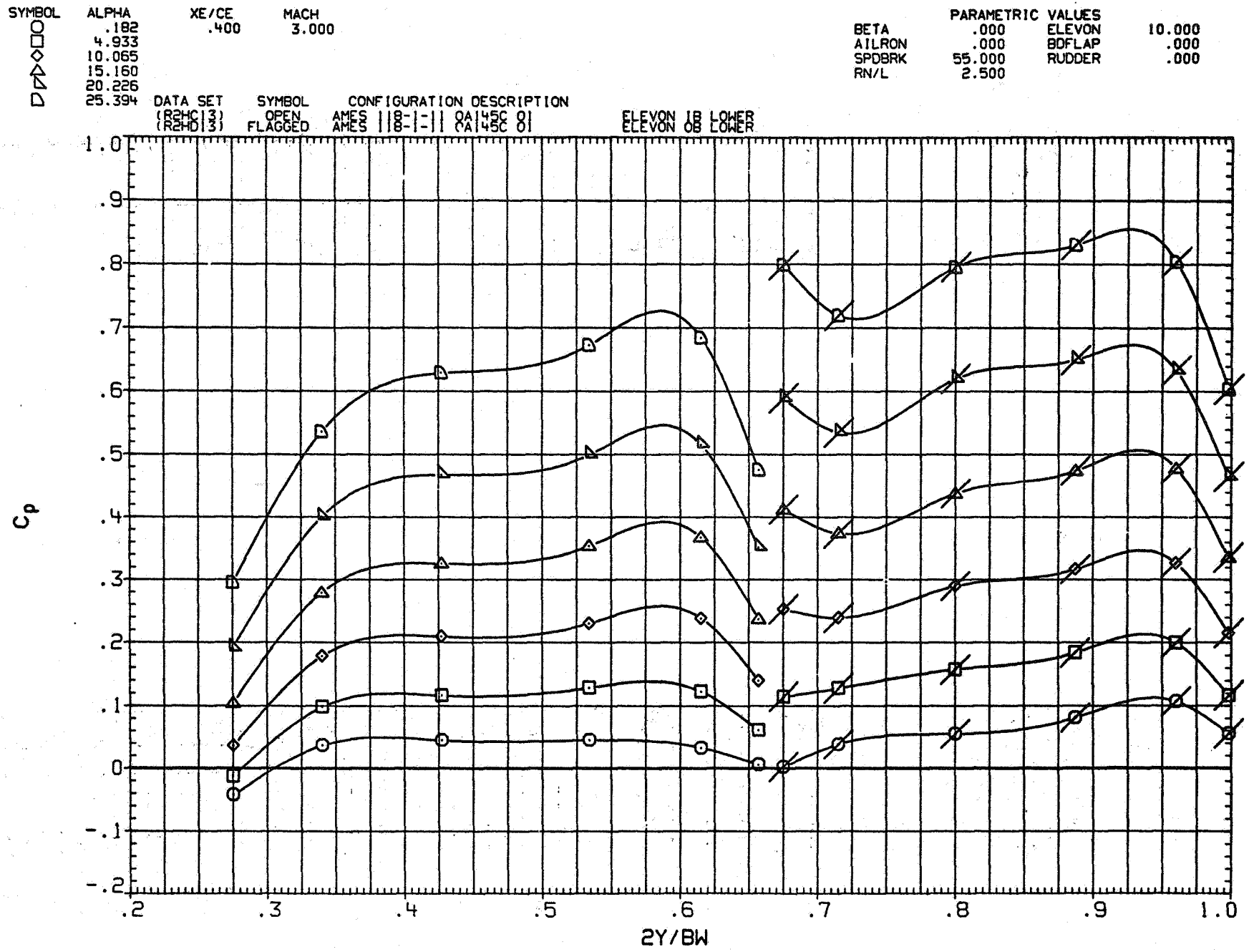


FIG.80 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

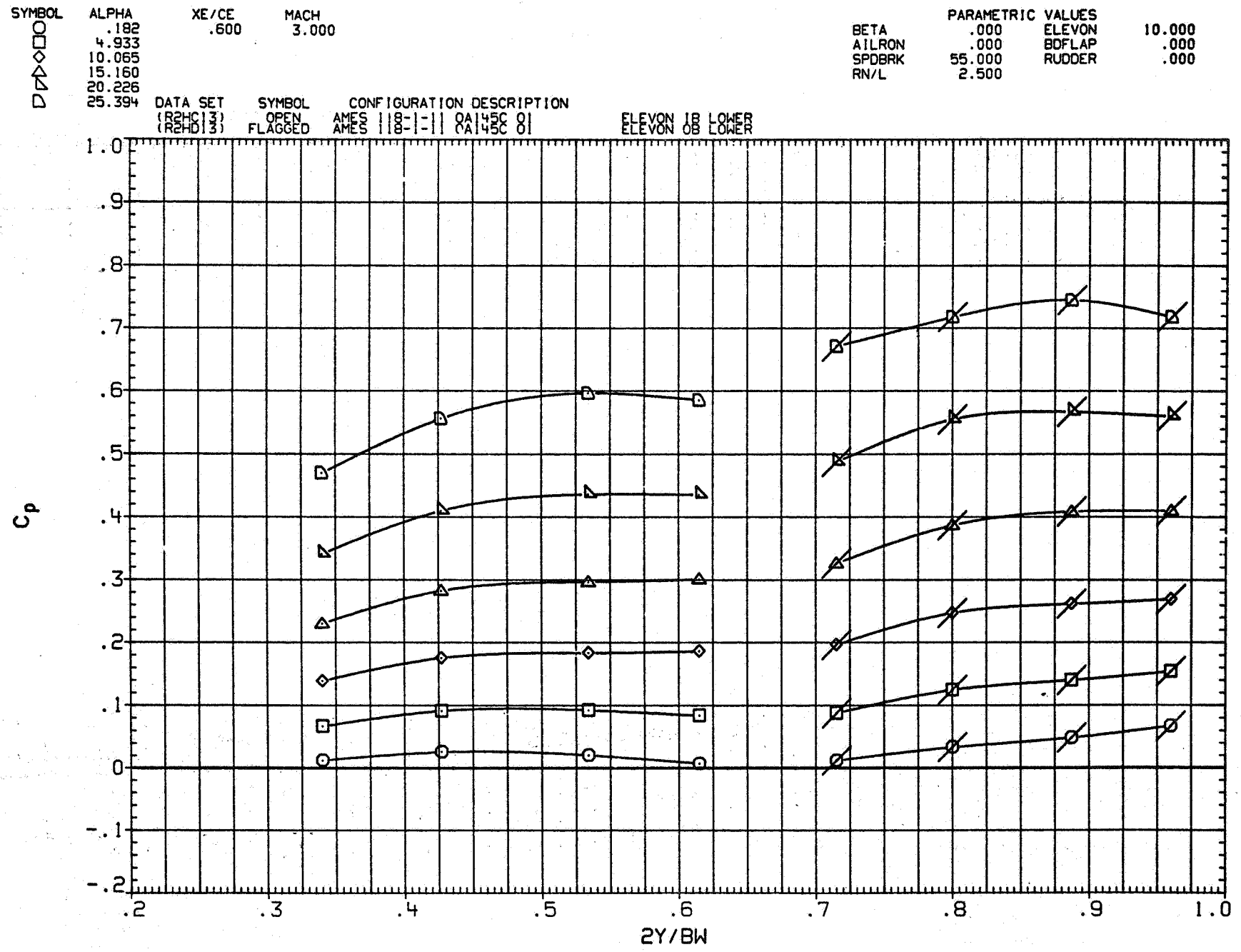


FIG.80 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

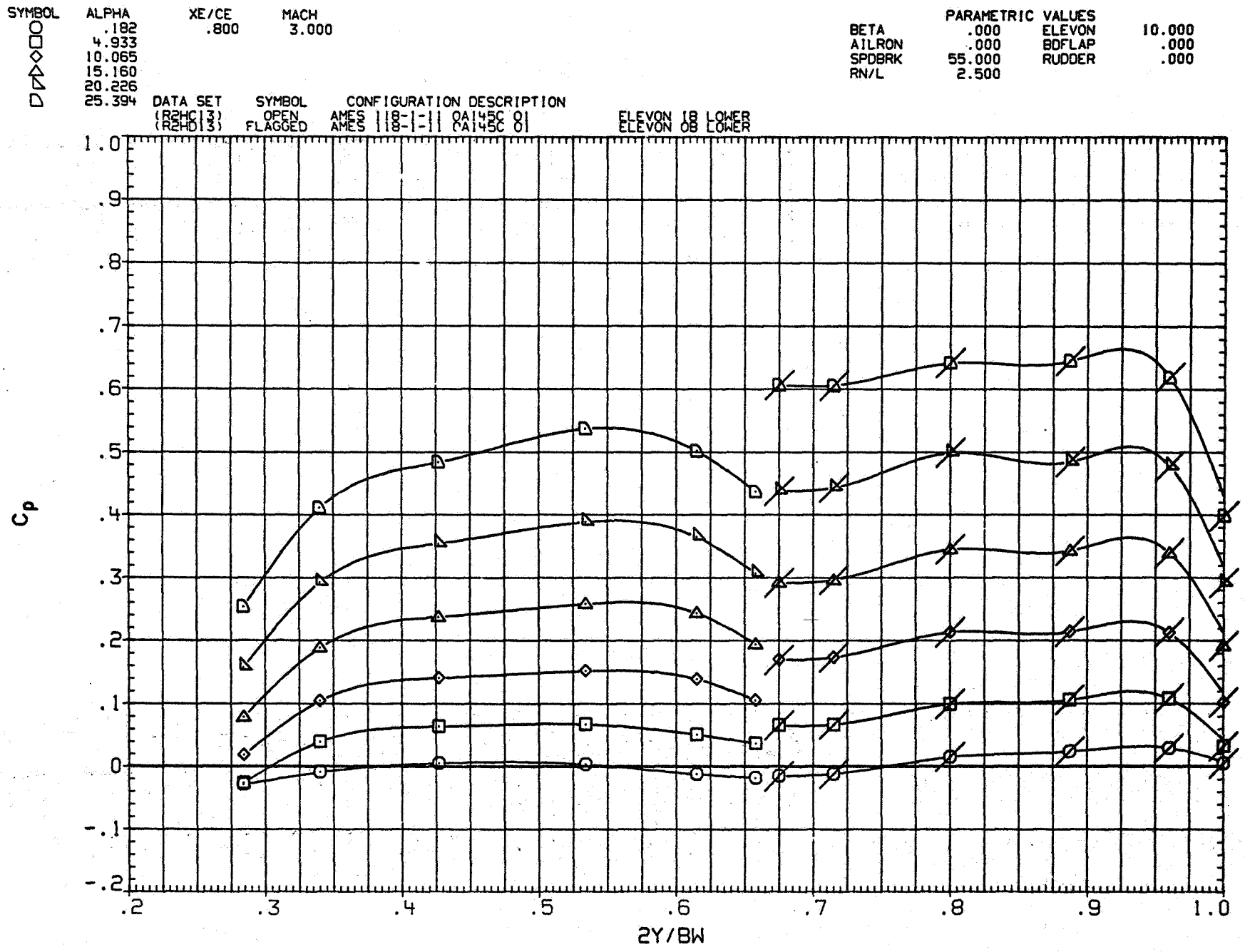


FIG.80 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 10

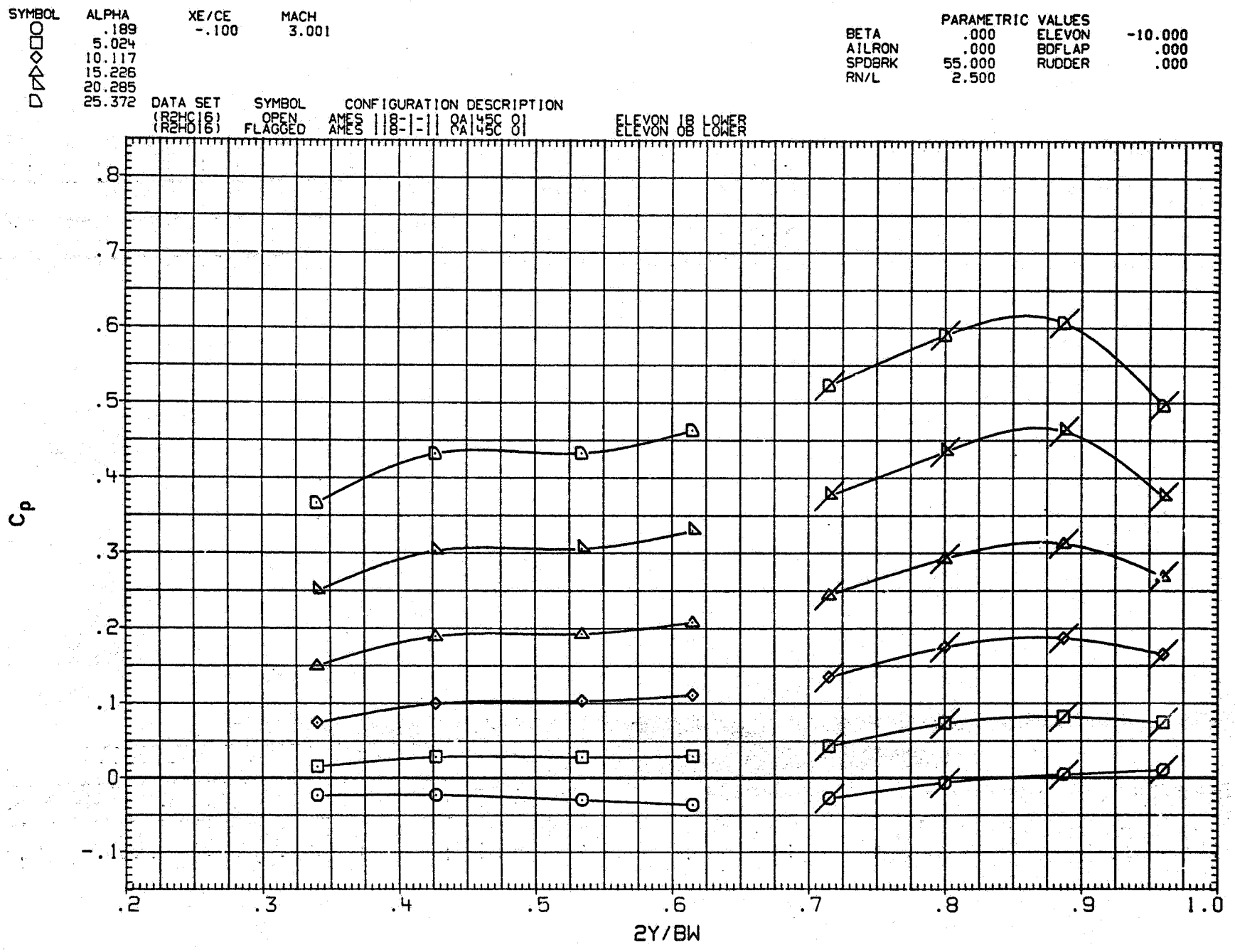


FIG.81 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

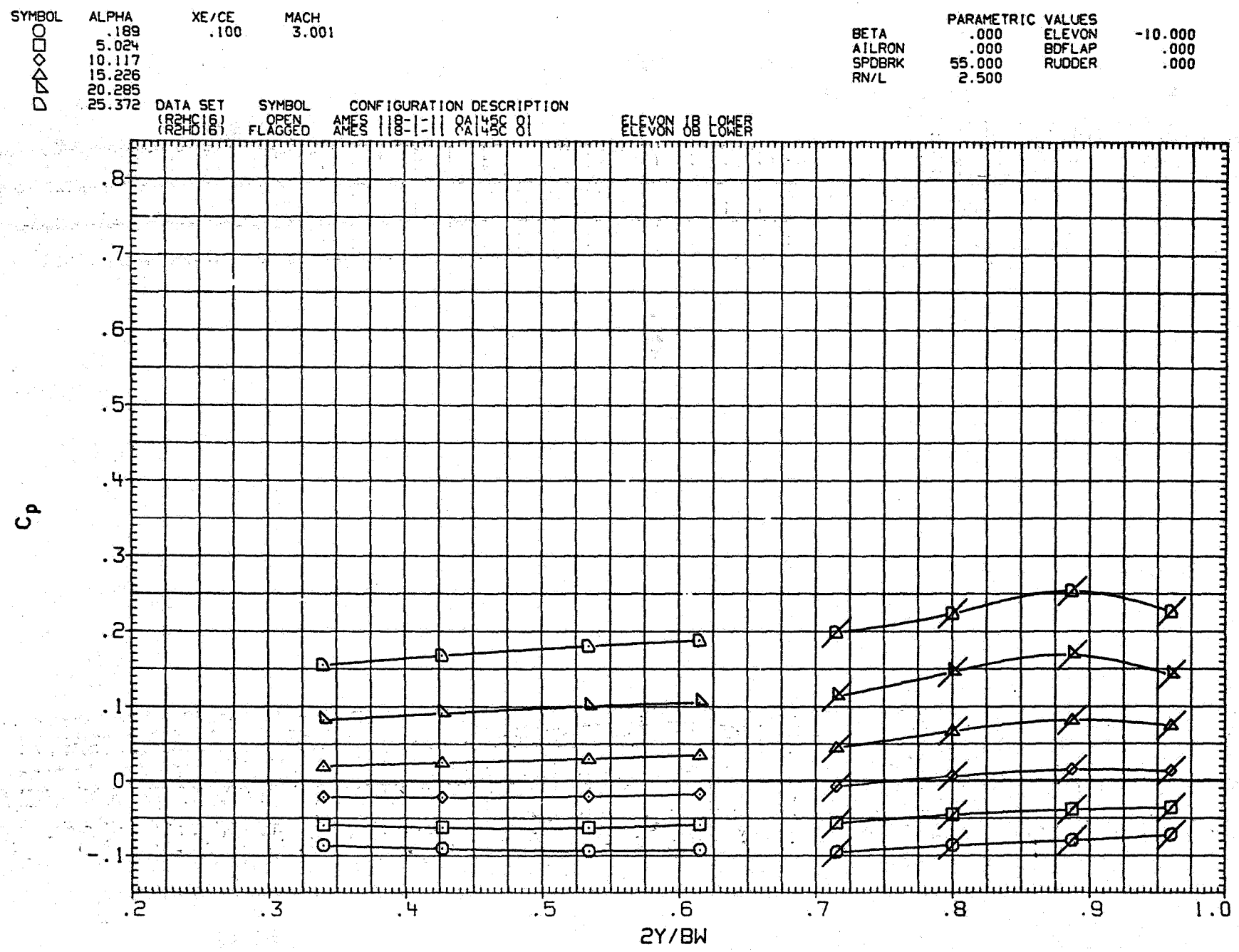


FIG.81 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

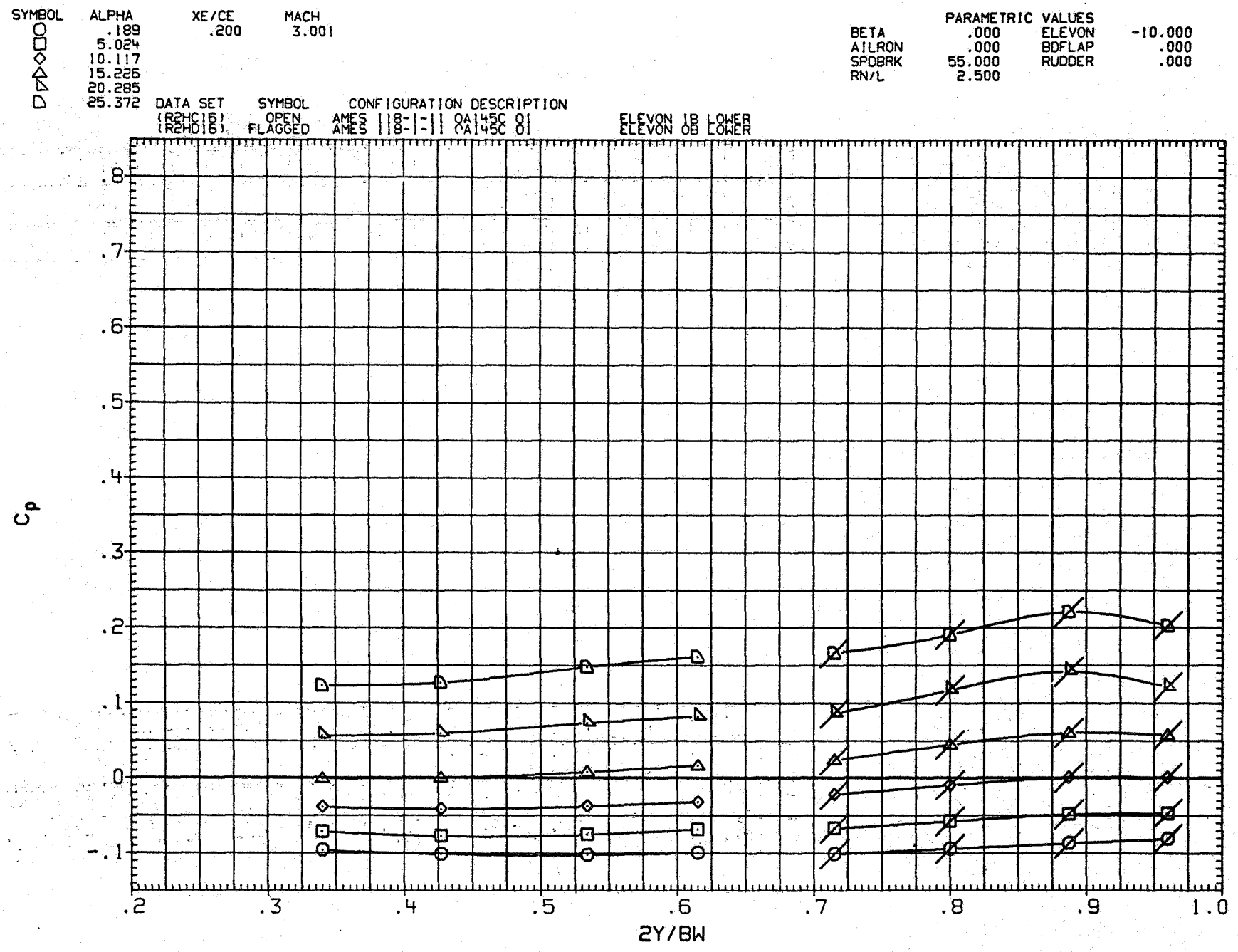


FIG.81 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

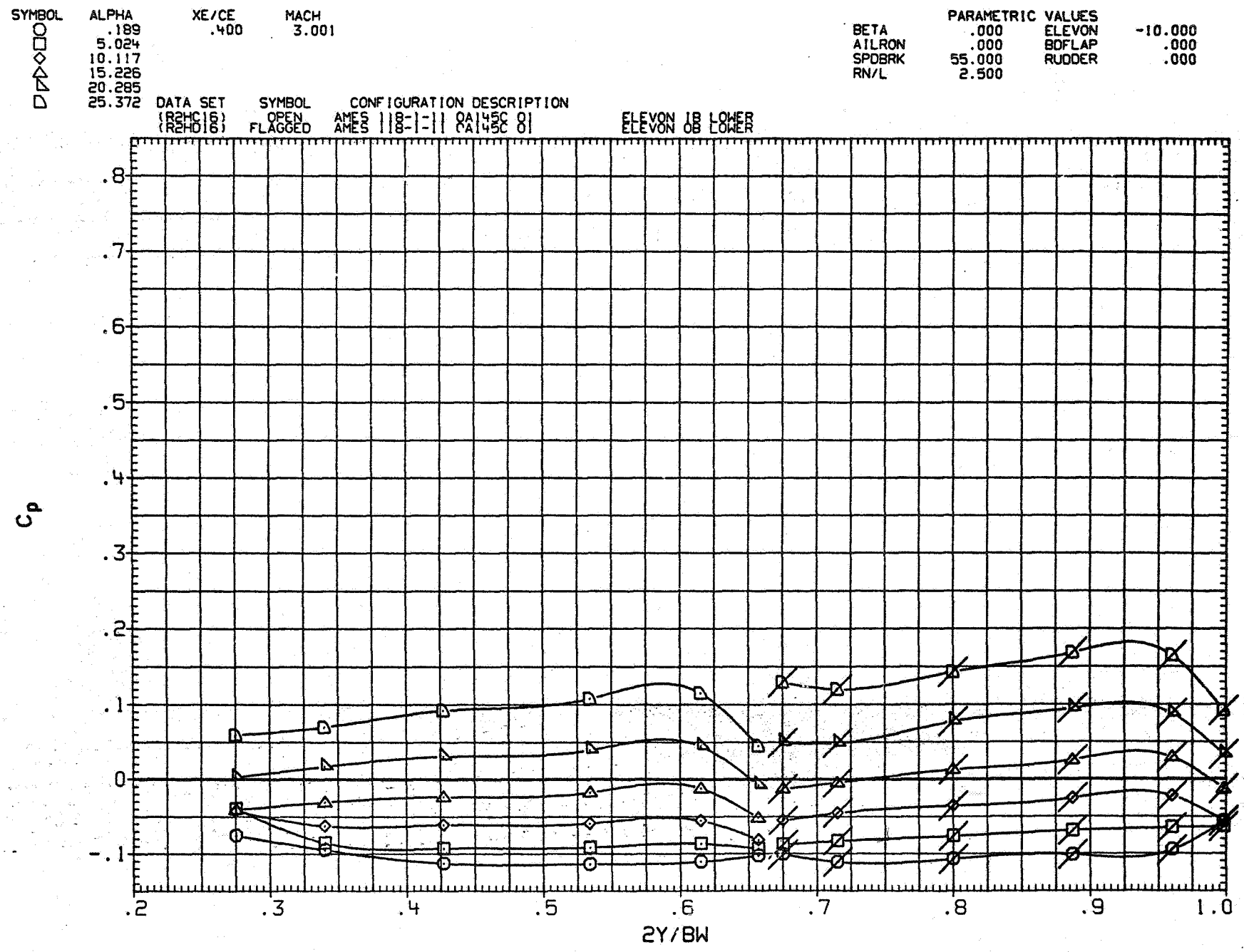


FIG.81 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

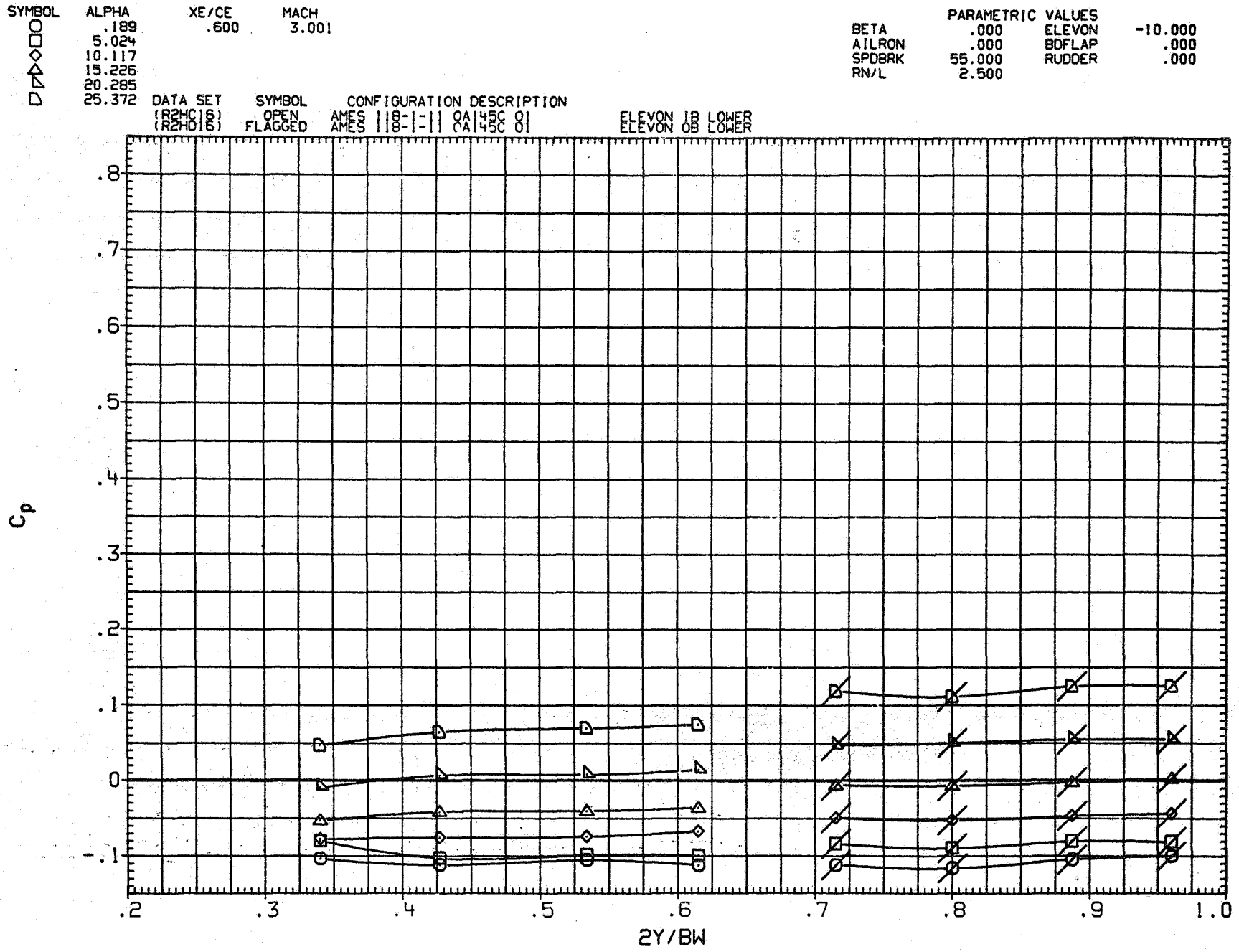


FIG.81 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

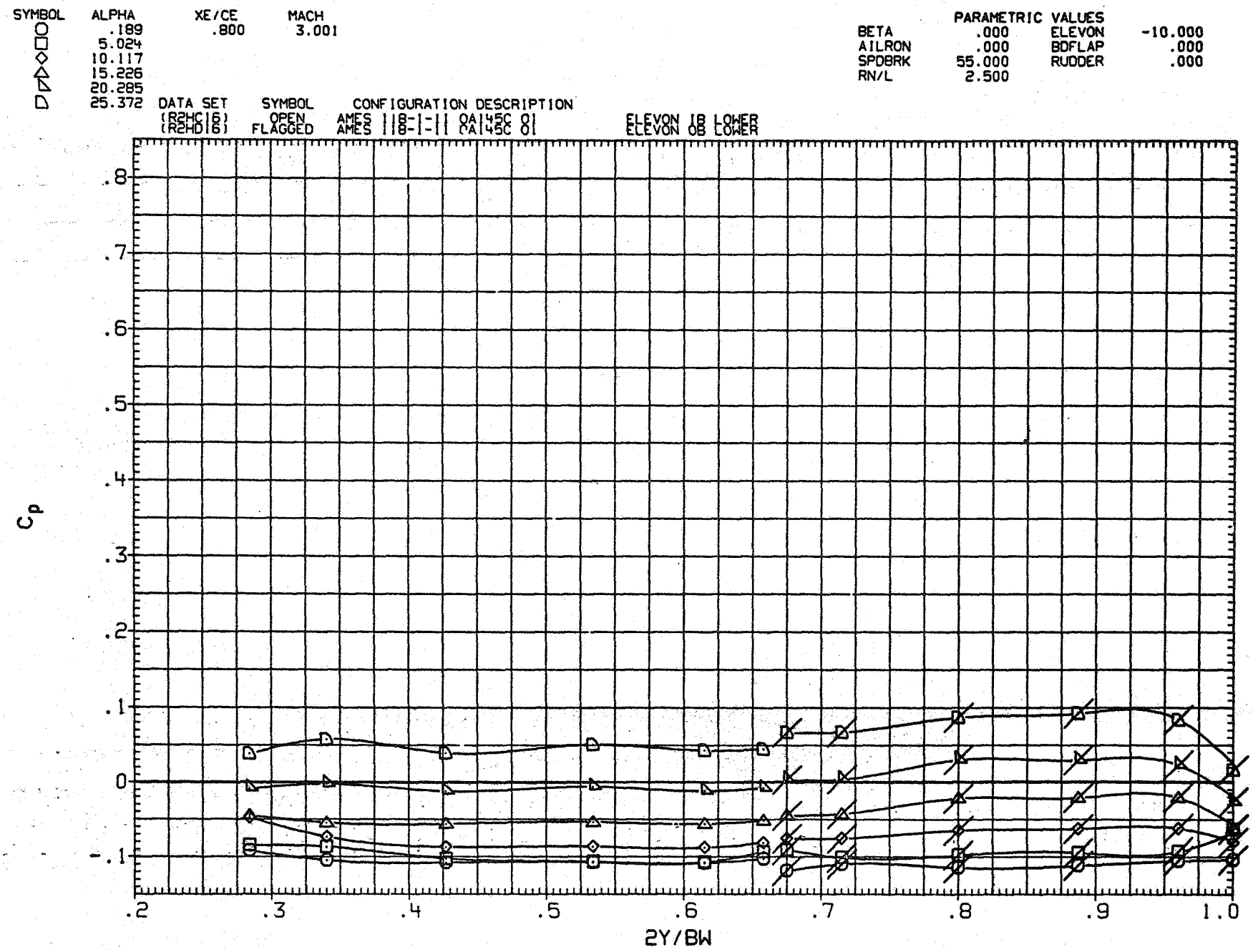


FIG.81 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -10

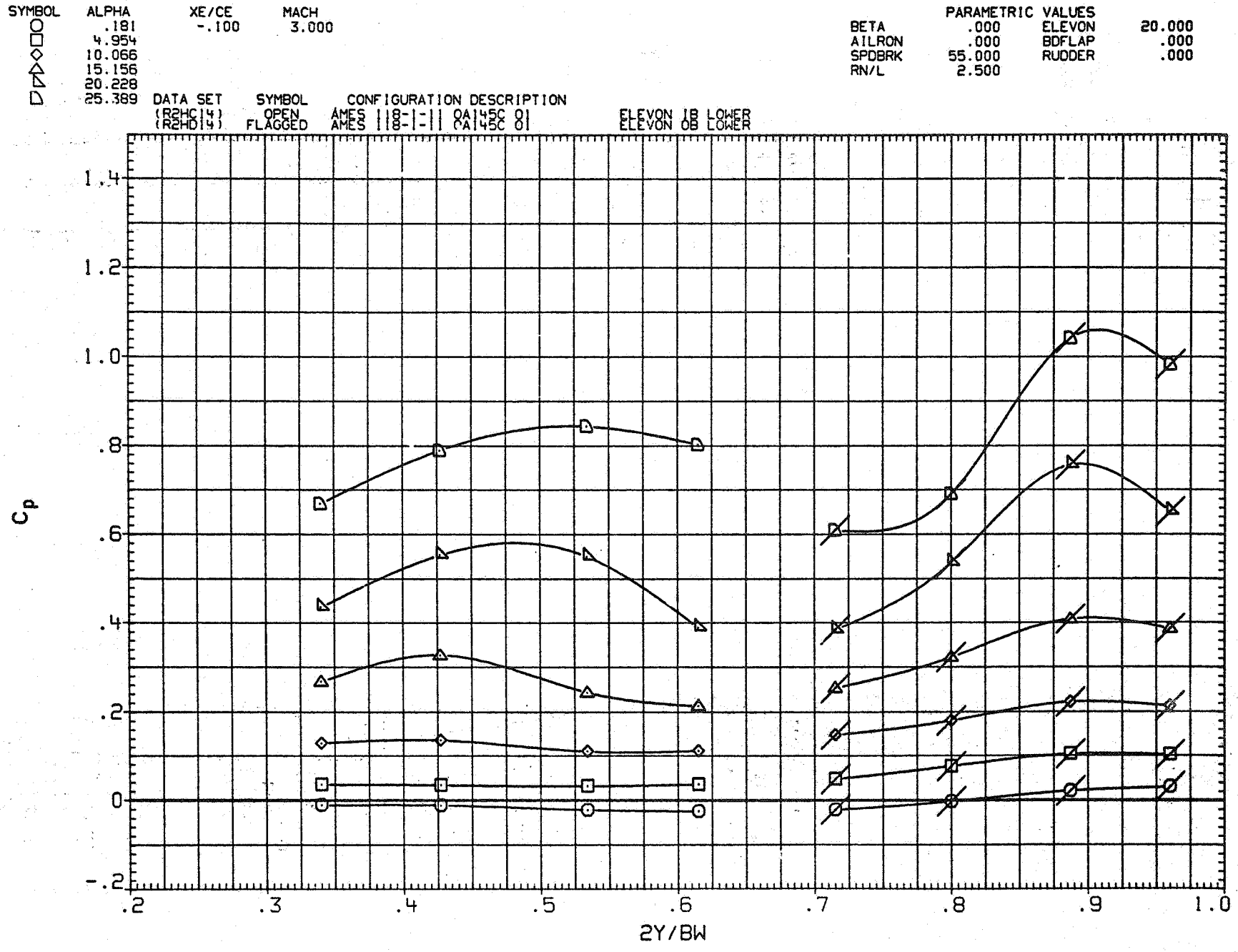


FIG.82 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

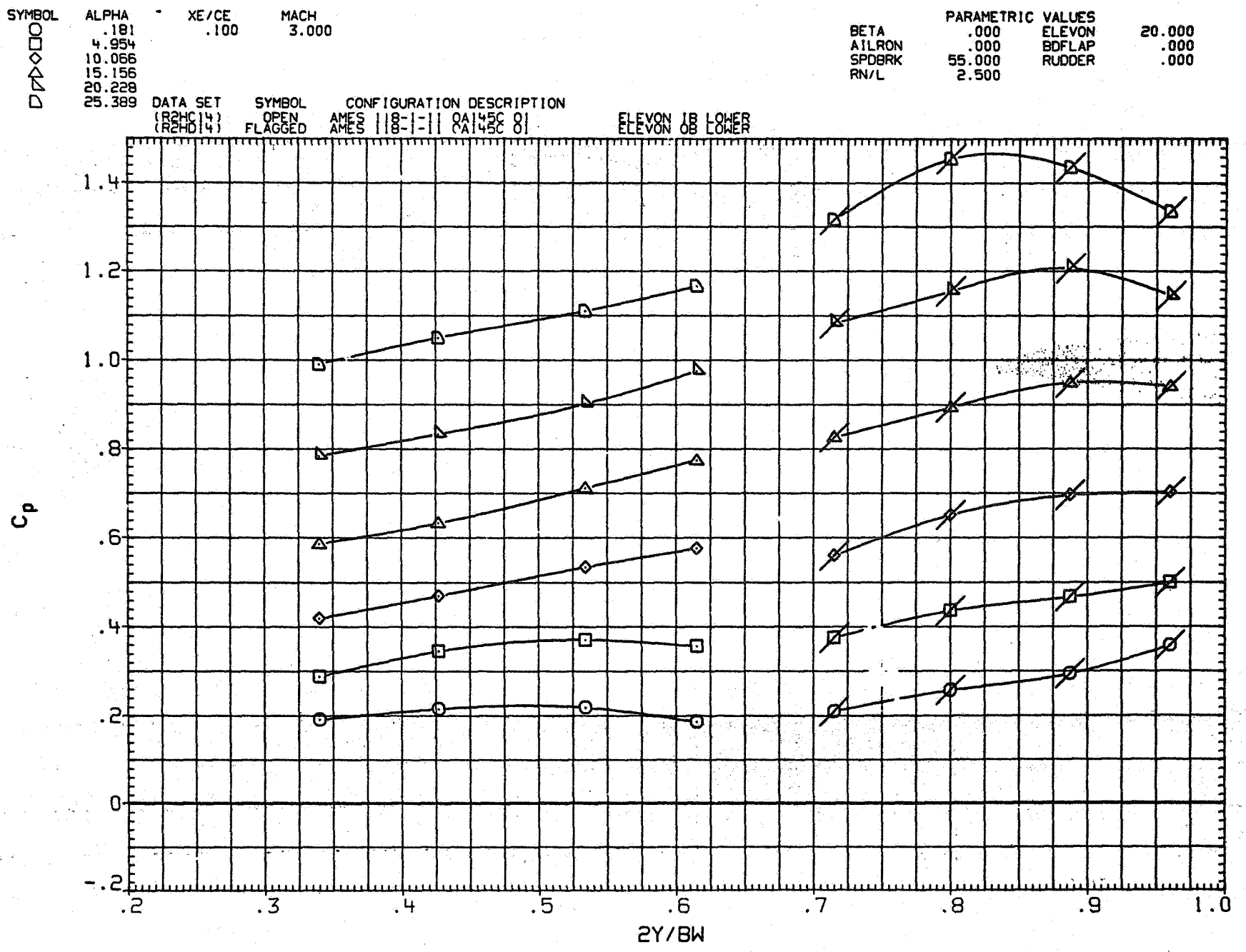


FIG.82 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

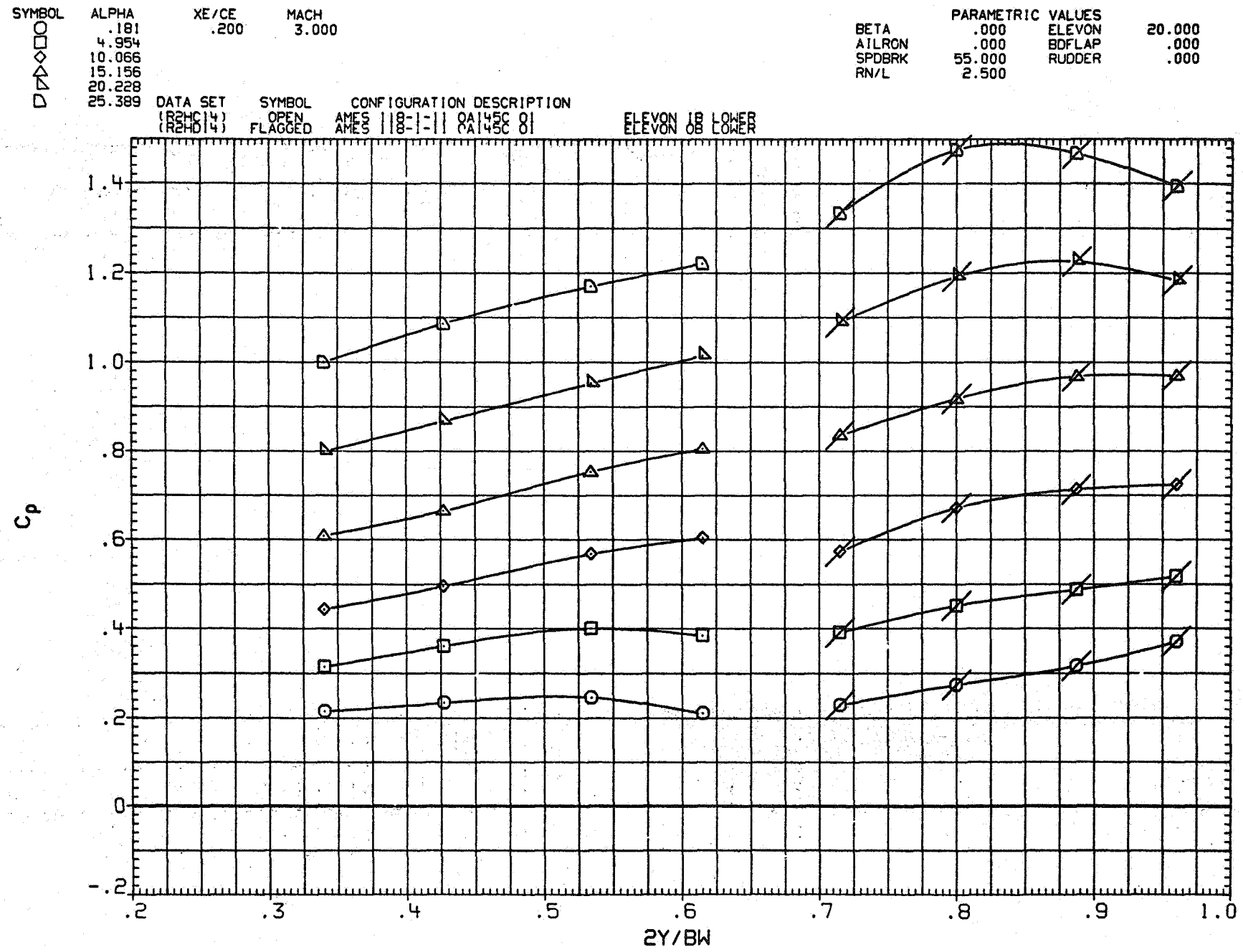


FIG.82 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

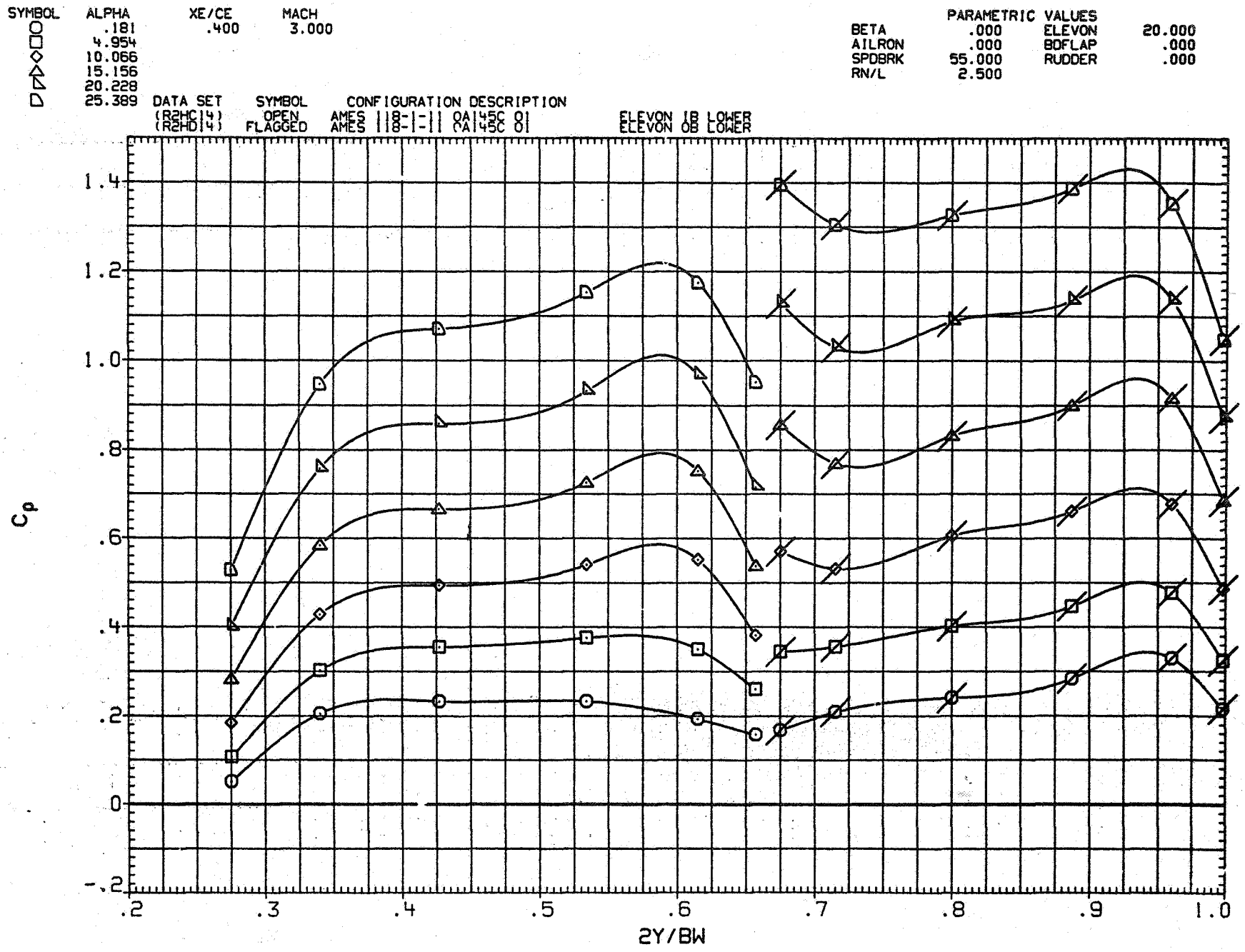


FIG.82 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

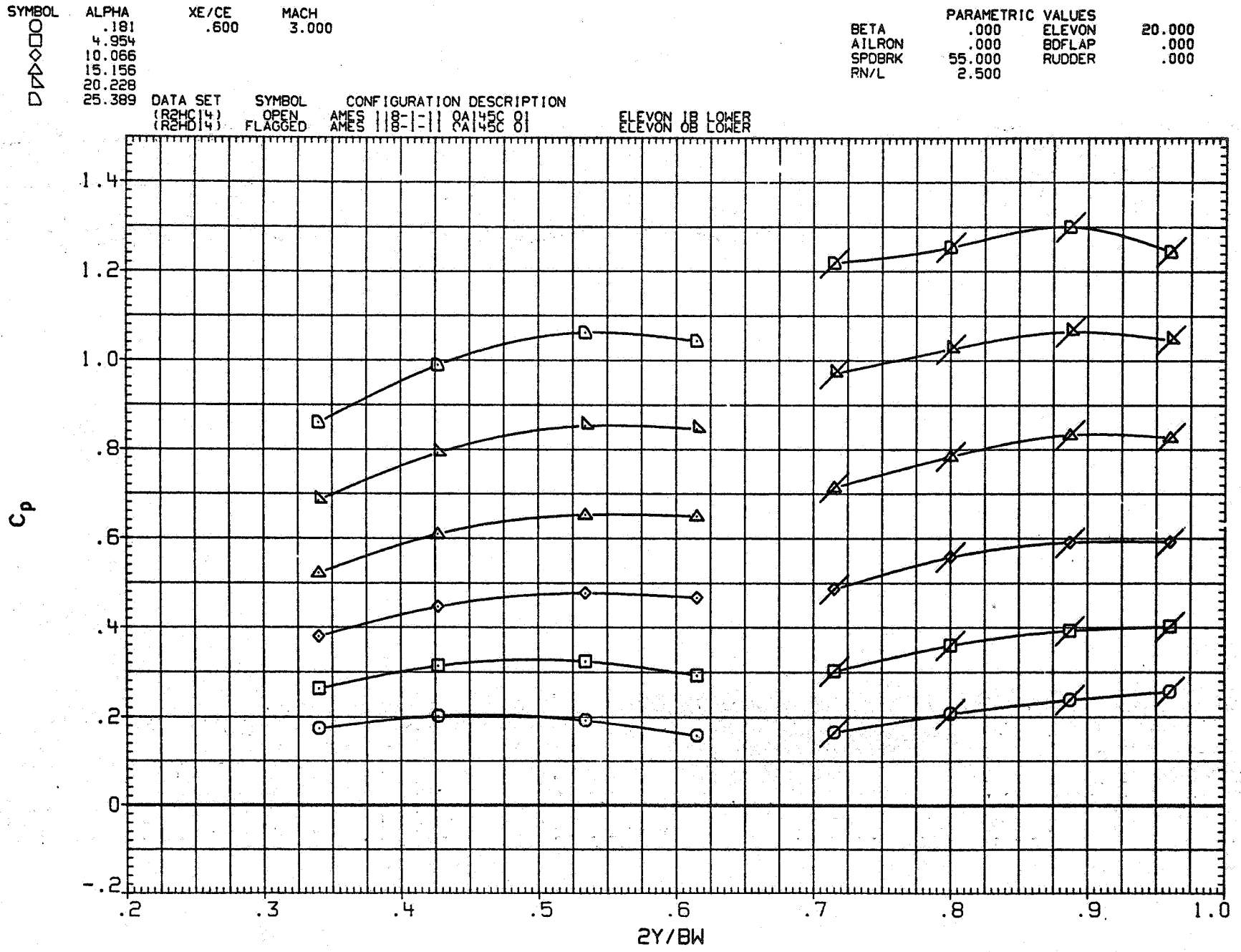


FIG.82 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

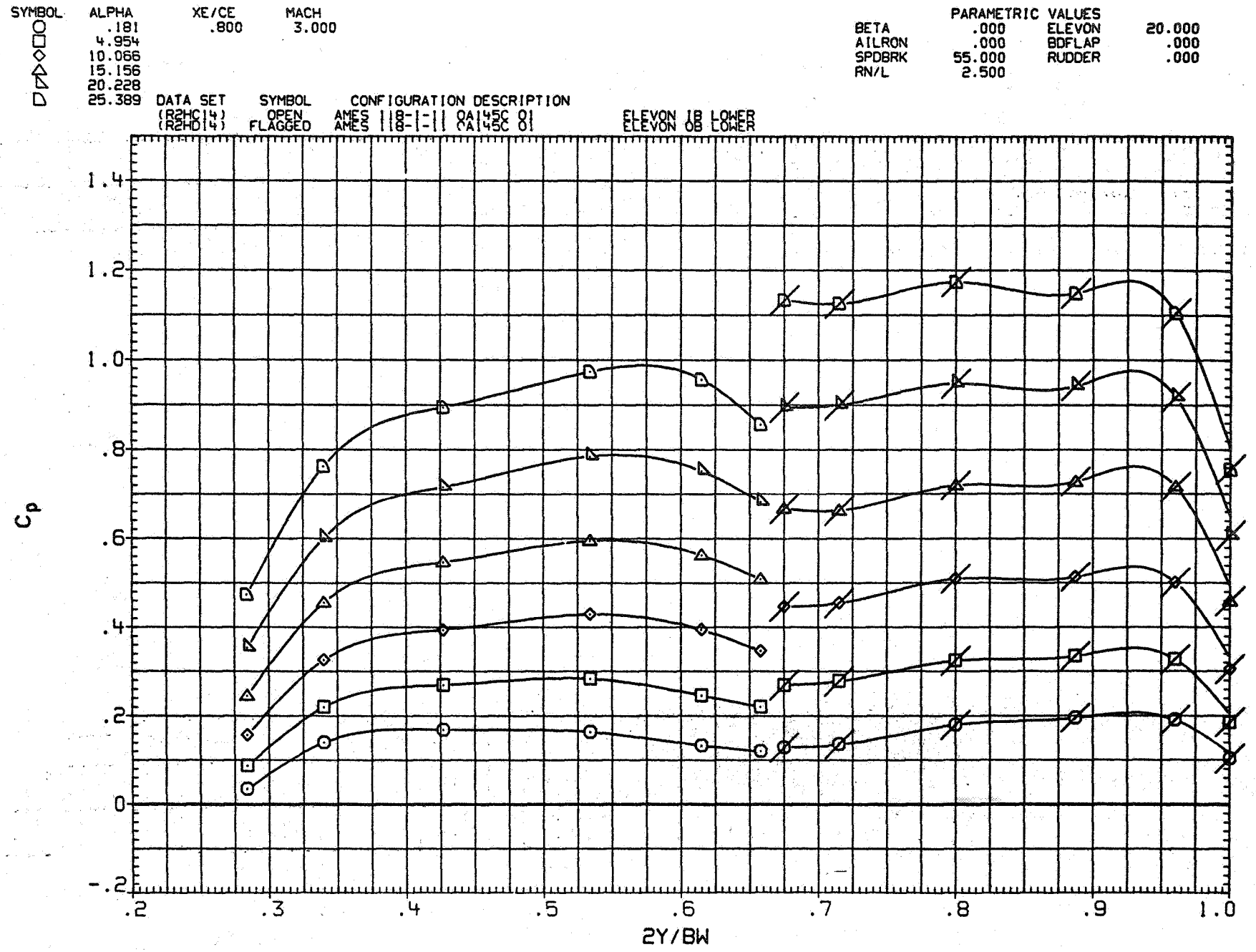


FIG.82 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = 20

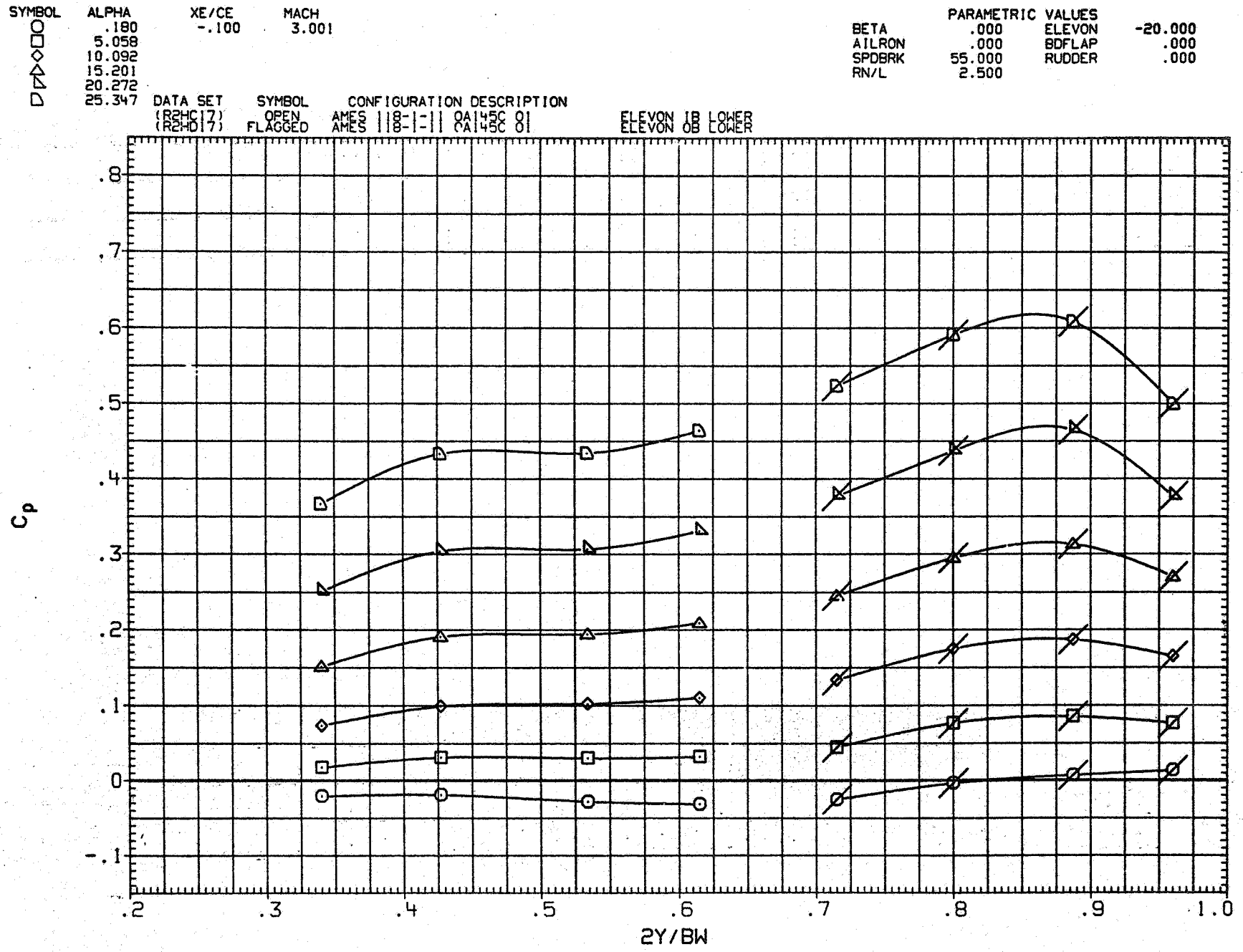


FIG.83 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

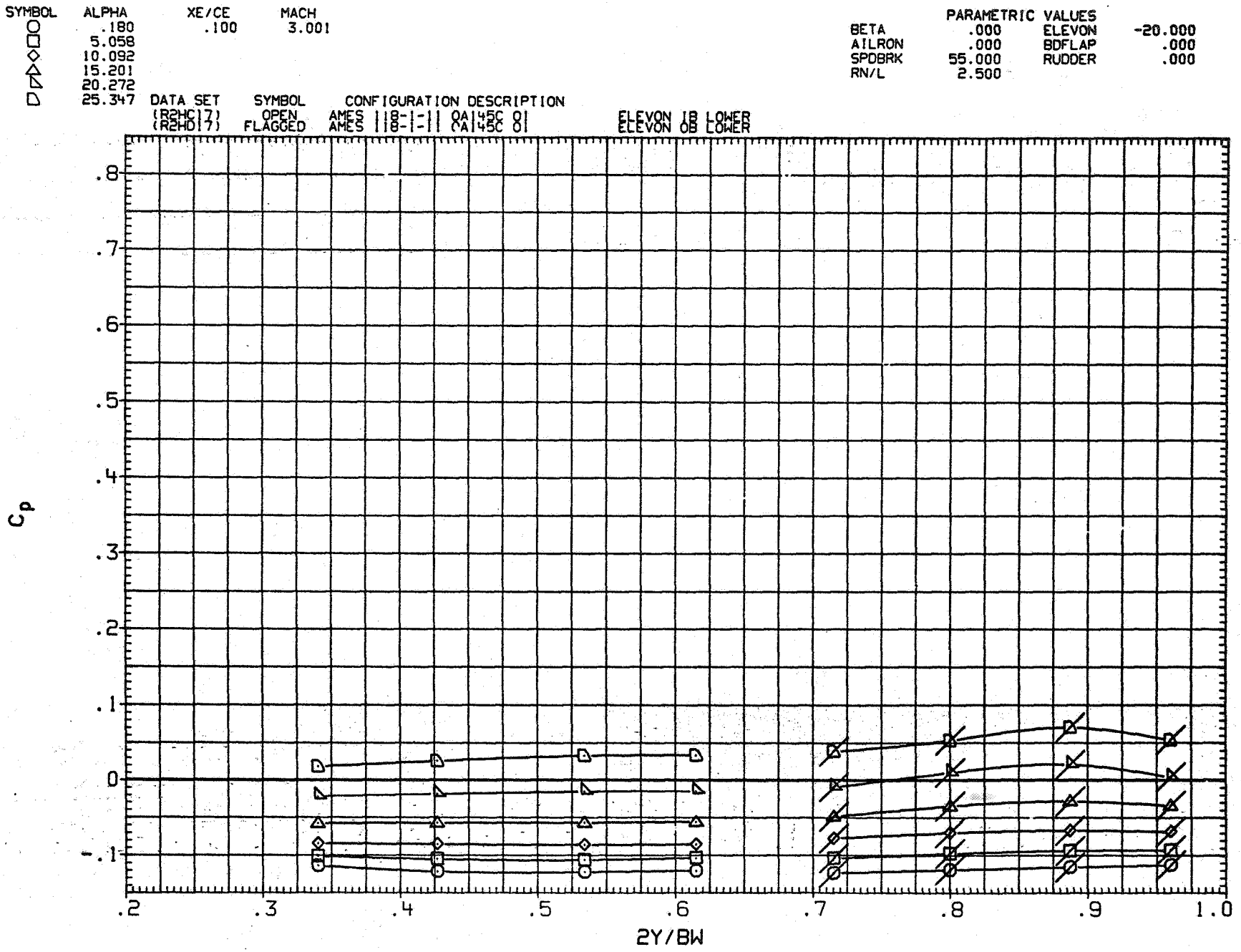


FIG.83 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

SYMBOL	ALPHA	XE/CE	MACH
○	.180	.200	3.001
□	5.058		
◇	10.092		
△	15.201		
⊿	20.272		
D	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	
(R2HC17)	OPEN	AMES 118-1-11 OA145C 01	ELEVON IB LOWER
(R2HD17)	FLAGGED	AMES 118-1-11 OA145C 01	ELEVON OB LOWER

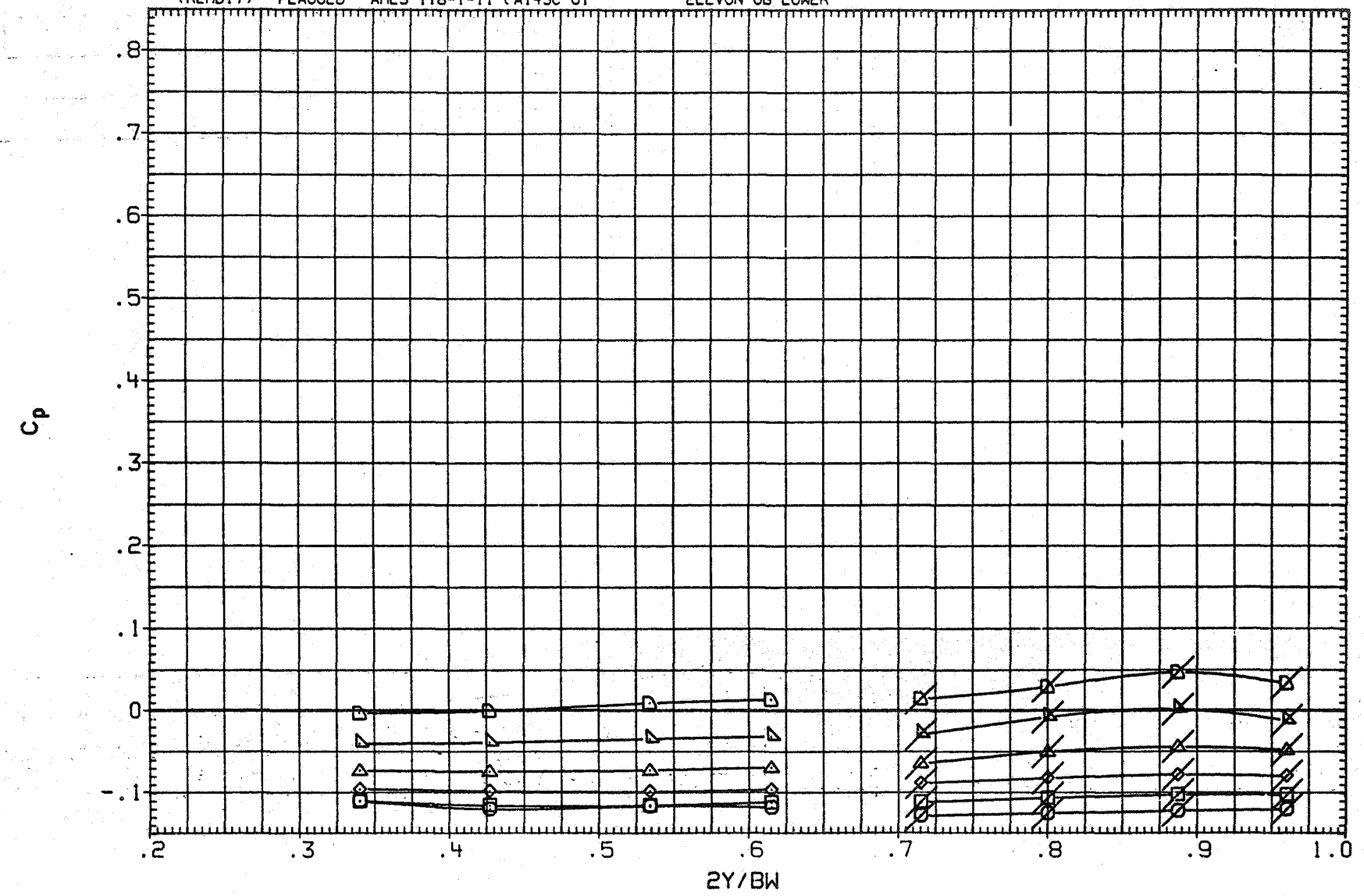


FIG.83 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

SYMBOL	ALPHA	XE/CE	MACH
○	.180	.400	3.001
□	5.058		
◇	10.092		
△	15.201		
◁	20.272		
D	25.347		

PARAMETRIC VALUES			
BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(R2HC17)	OPEN	AMES 118-1-11 OA145C 01 ELEVON IB LOWER
(R2HD17)	FLAGGED	AMES 118-1-11 OA145C 01 ELEVON OB LOWER

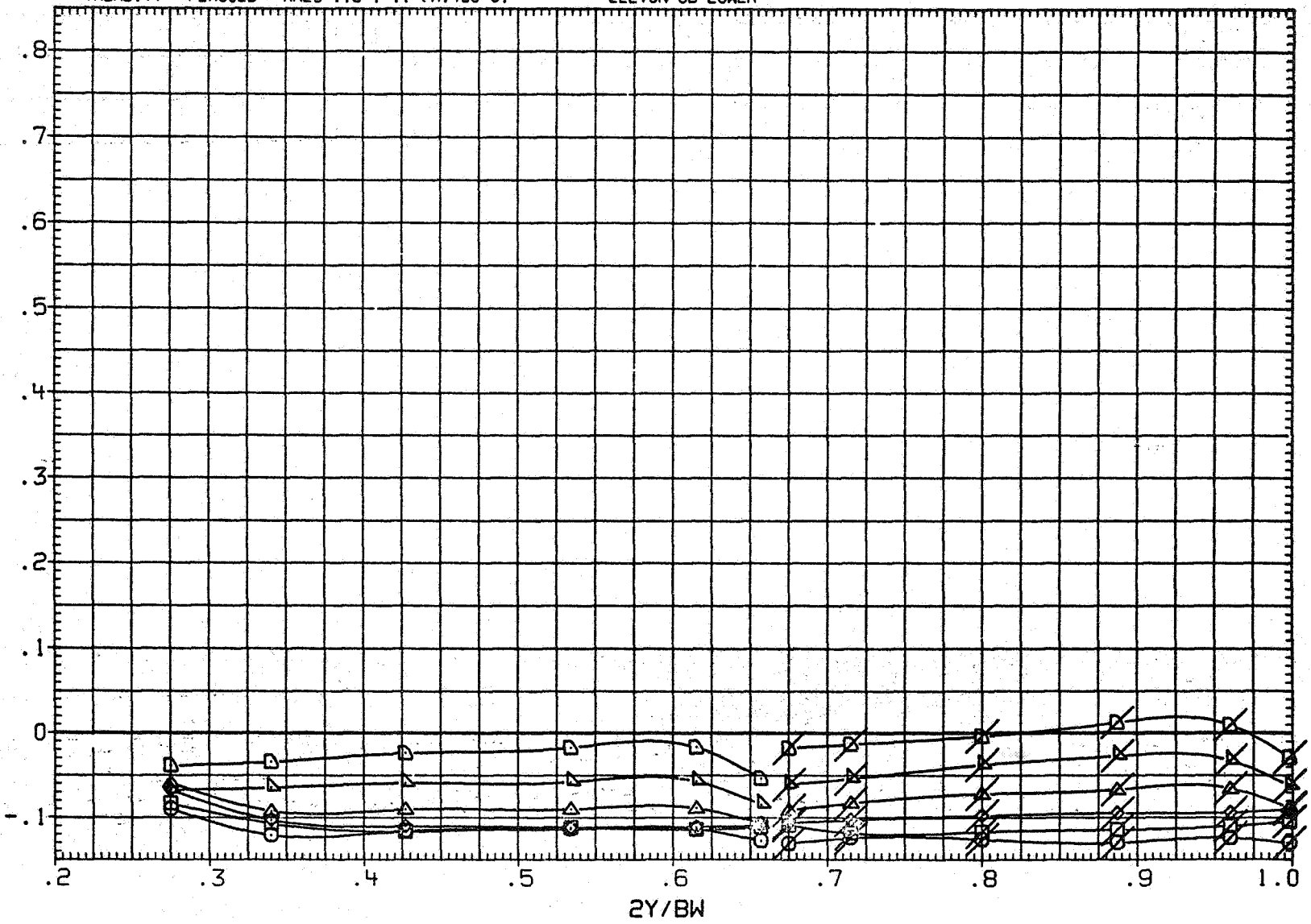


FIG.83 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

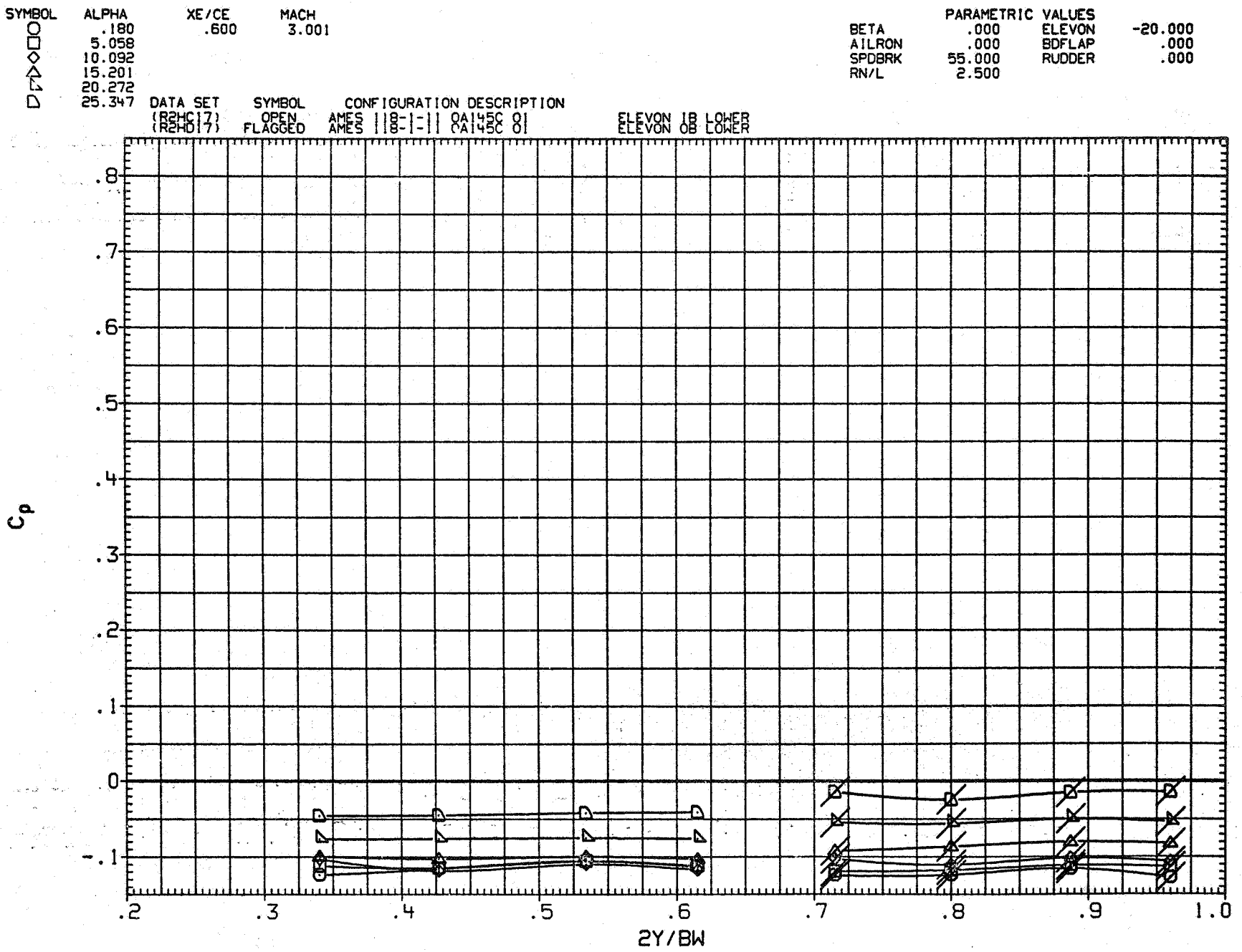


FIG.83 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

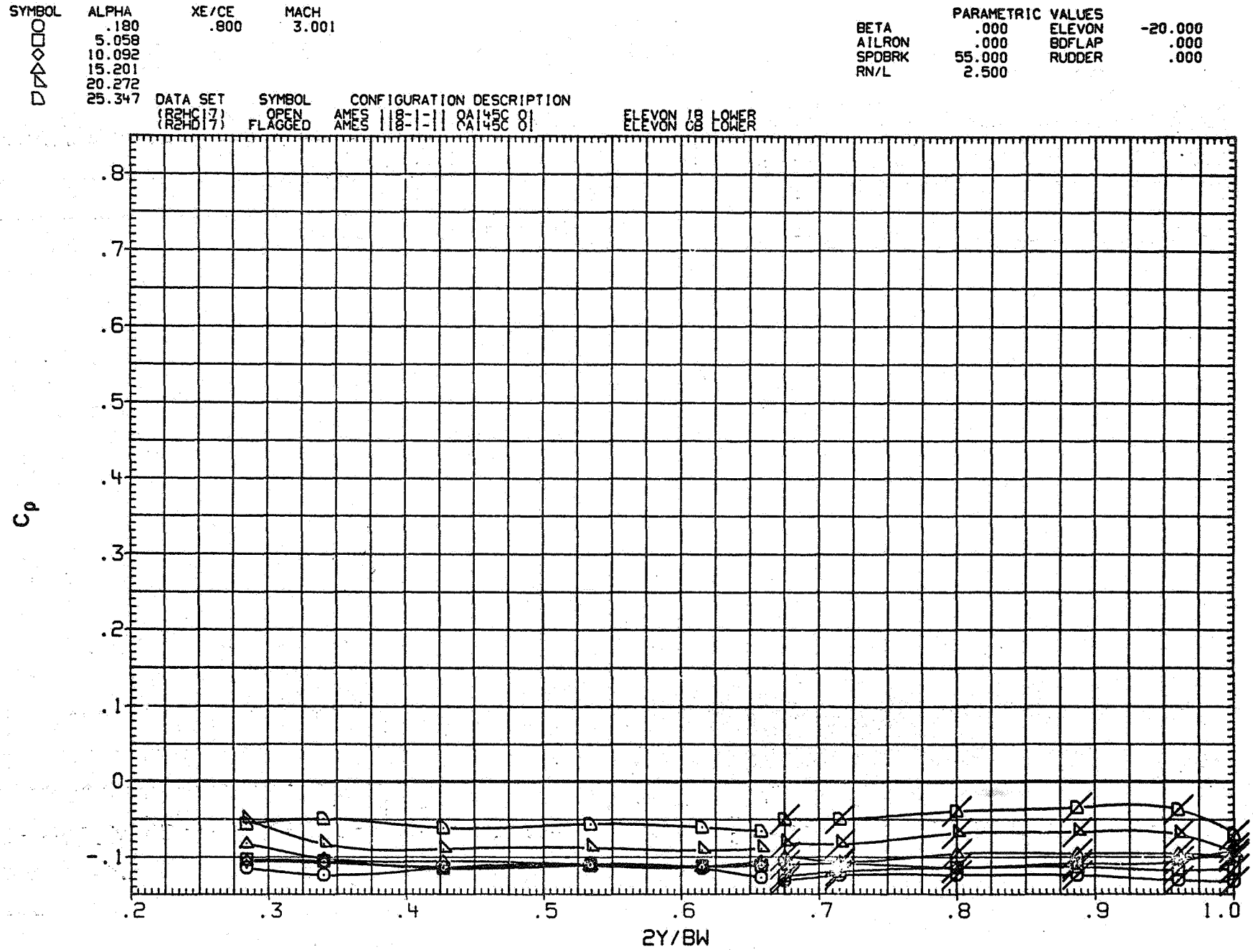


FIG.83 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -20

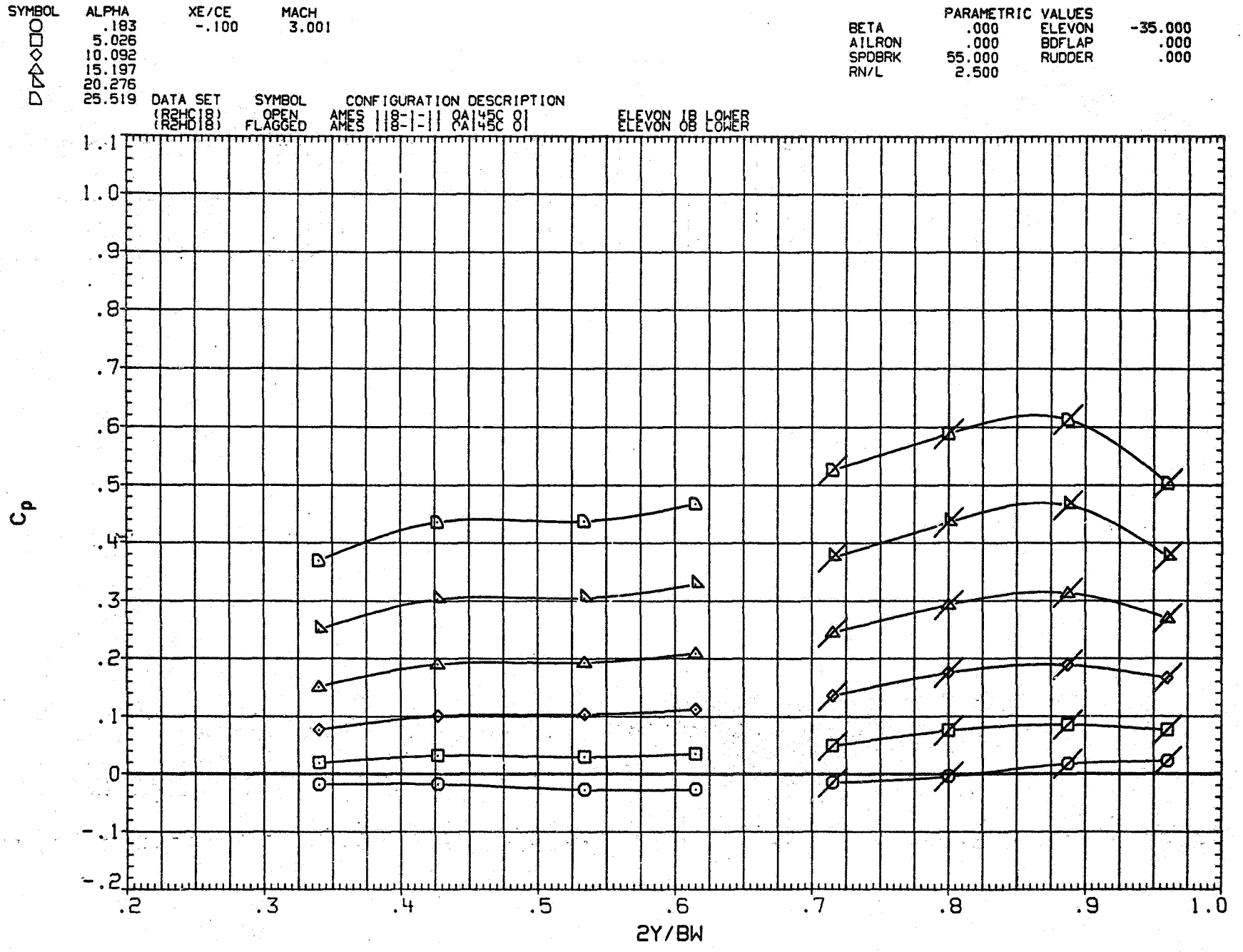


FIG.84 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

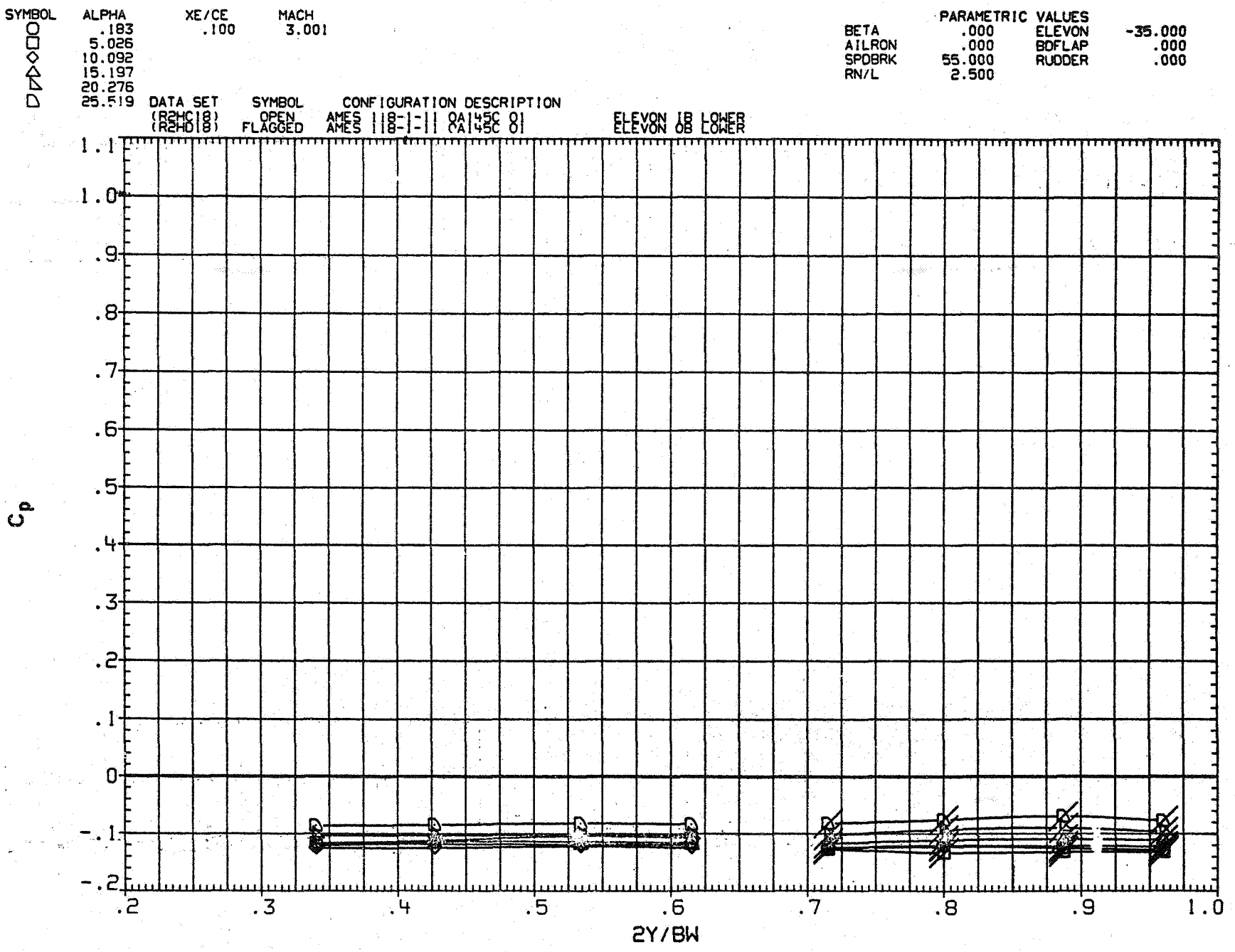


FIG.84 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

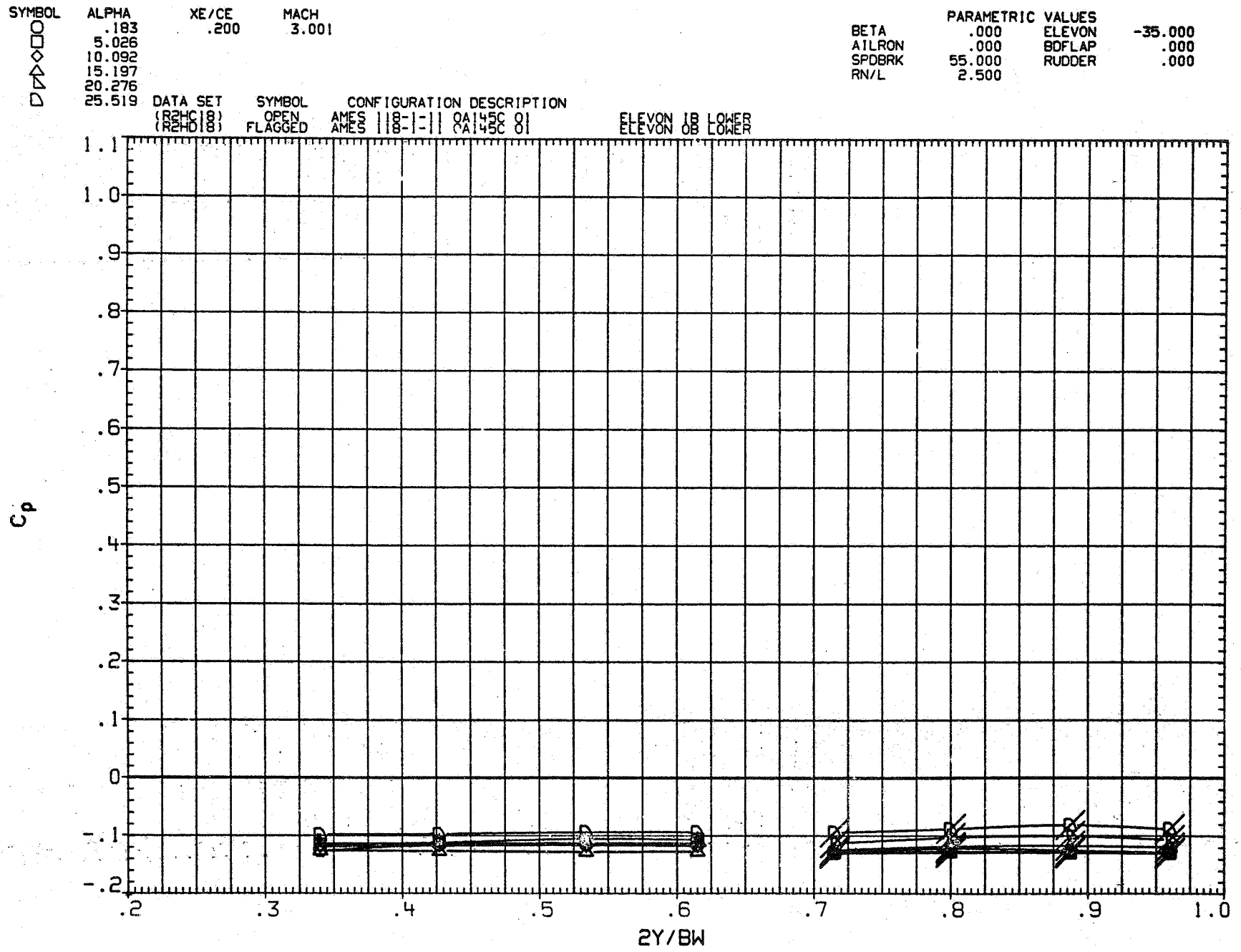


FIG.84 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

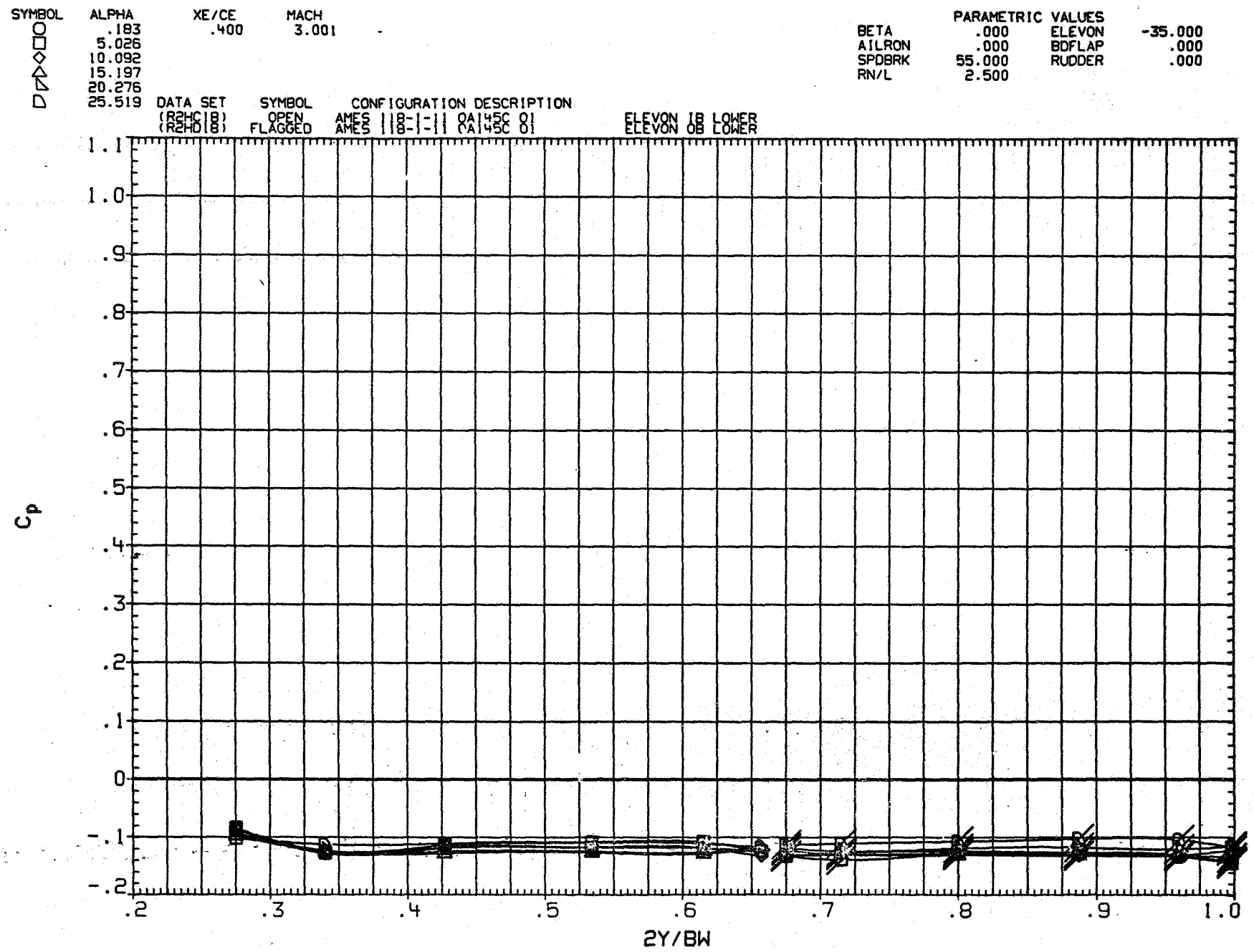


FIG.84 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

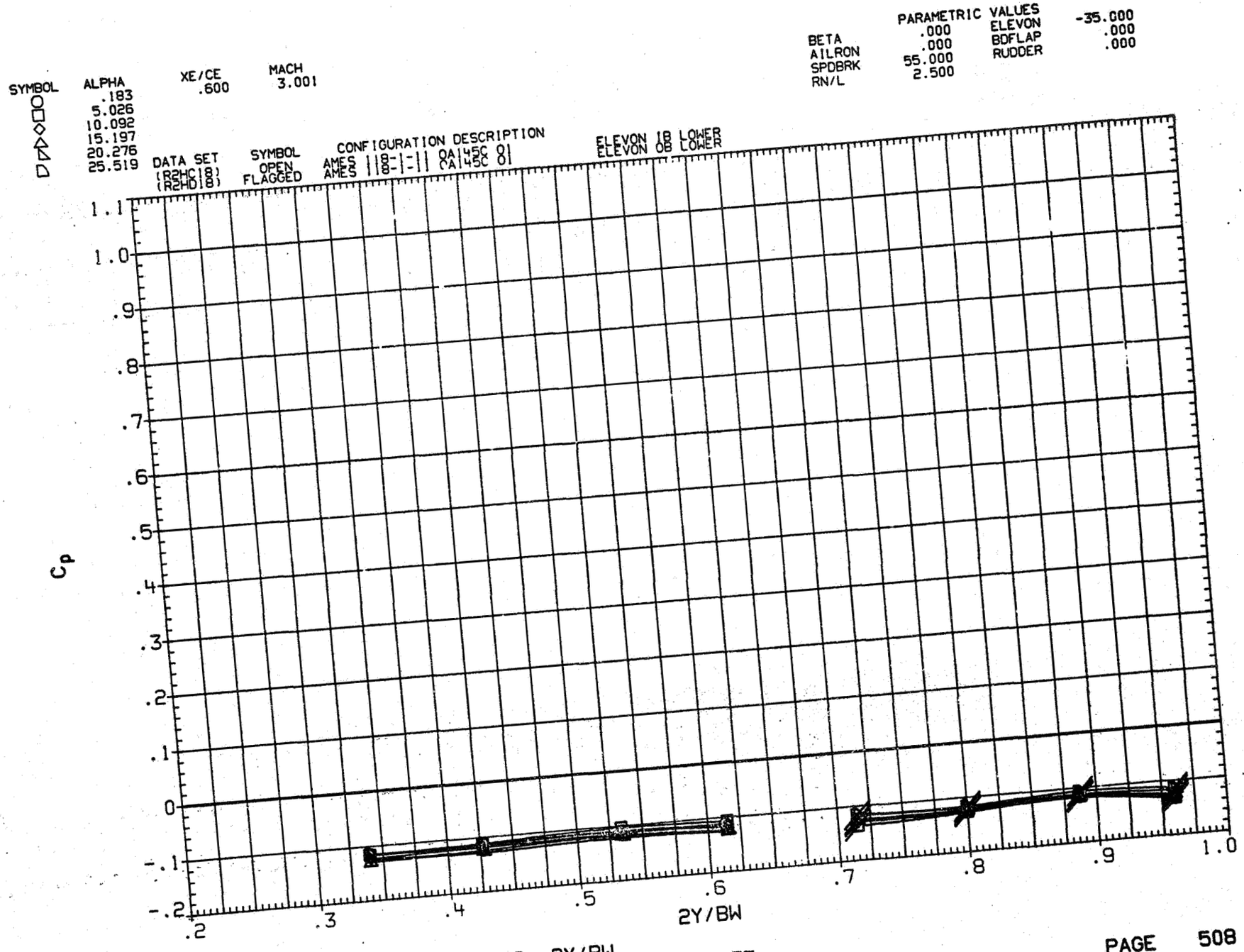


FIG.84 OA145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

SYMBOL	ALPHA	XE/CE	MACH
○	.183	.800	3.001
□	5.026		
◇	10.092		
△	15.197		
◁	20.276		
▷	25.519		

PARAMETRIC VALUES			
BETA	.000	ELEVON	-35.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(R2HC18)	OPEN	AMES 11B-1-11 0A145C 01 ELEVON IB LOWER
(R2HD18)	FLAGGED	AMES 11B-1-11 0A145C 01 ELEVON OB LOWER

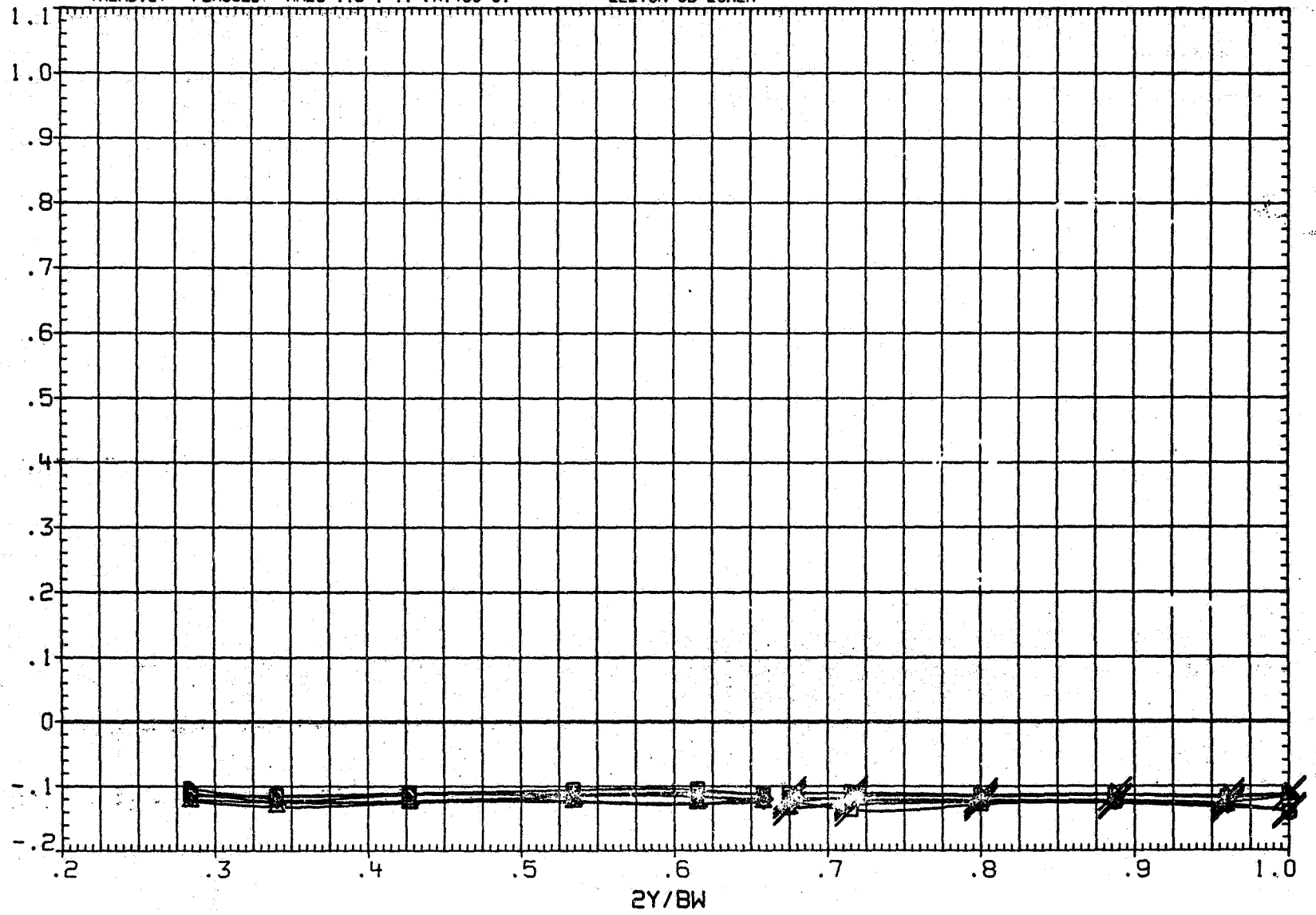


FIG.84 0A145C ELEVON CP VS. 2Y/BW
LOWER SURFACE, ALPHA EFFECT AT ELEVON = -35

(R2HI02) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.307	.340	2.493
□	4.010	.427	
◇	10.124		
△	15.236		
◁	20.318		
D	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

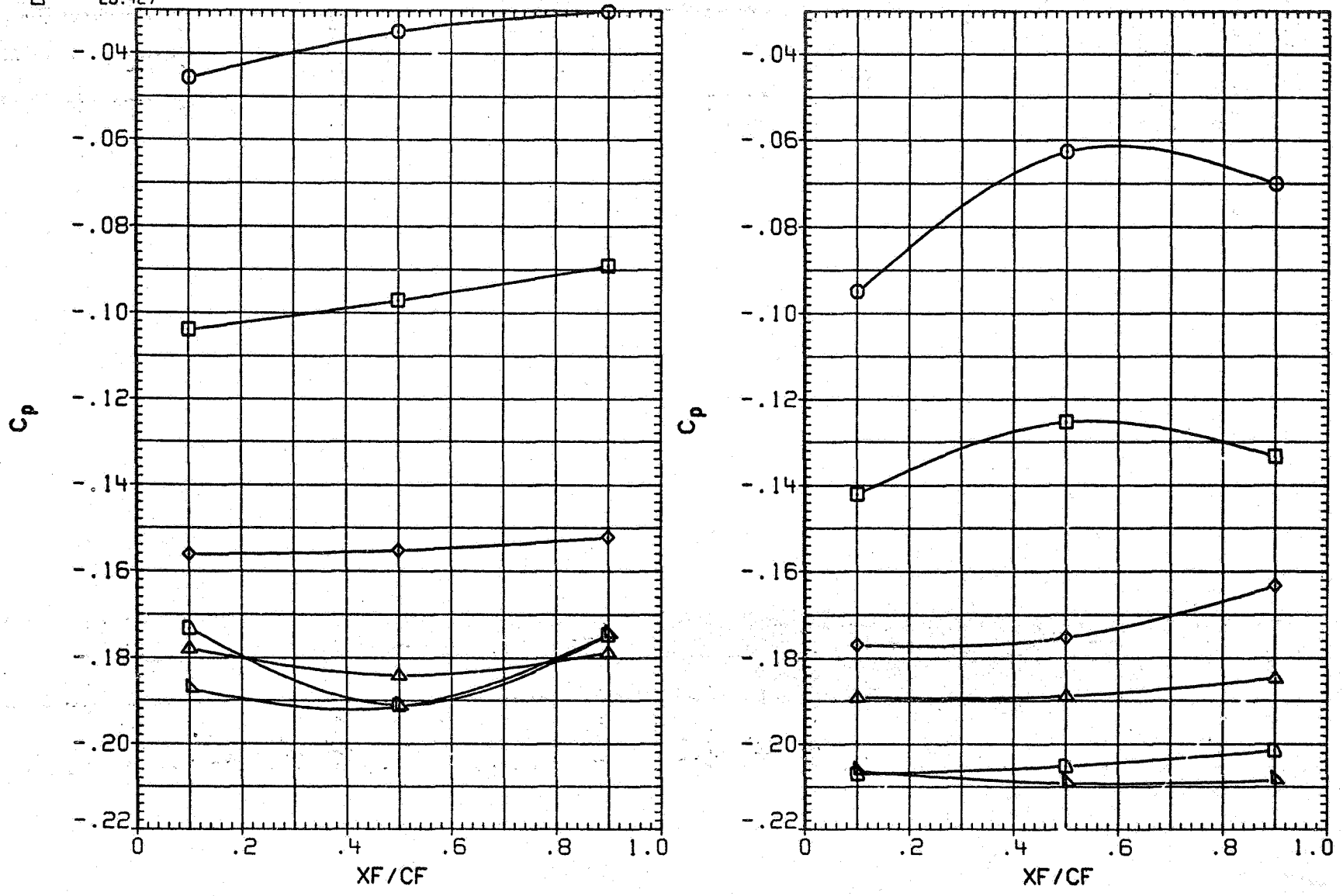


FIG.85 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HI02) AMES 118-1-11 OA145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.307	.534	2.493
□	4.010	.615	
◇	10.124		
△	15.236		
◁	20.318		
▷	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

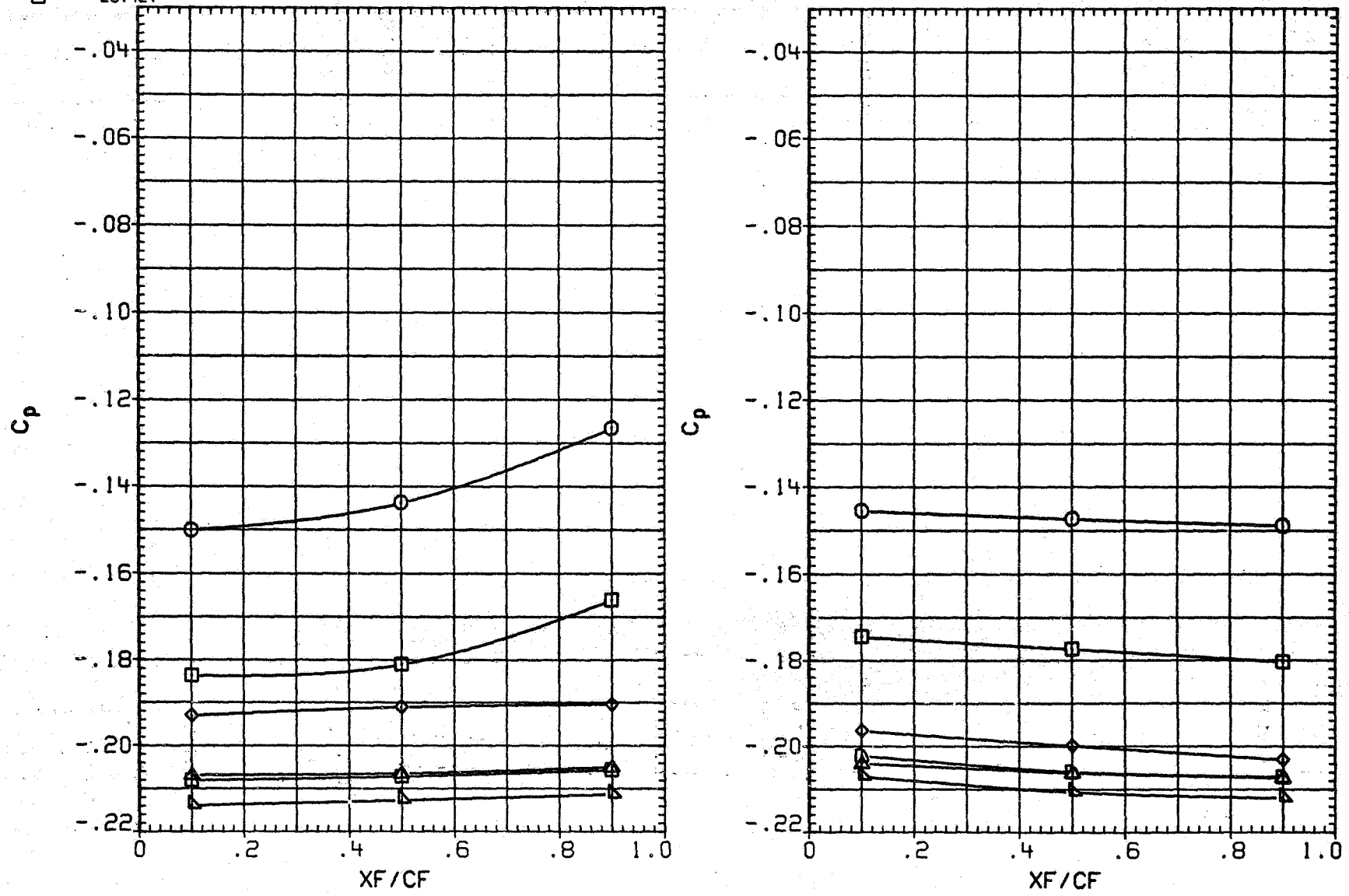


FIG.85 OA145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HI02) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.340	3.001
□	3.882	.427	
◇	9.949		
◁	15.195		
△	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

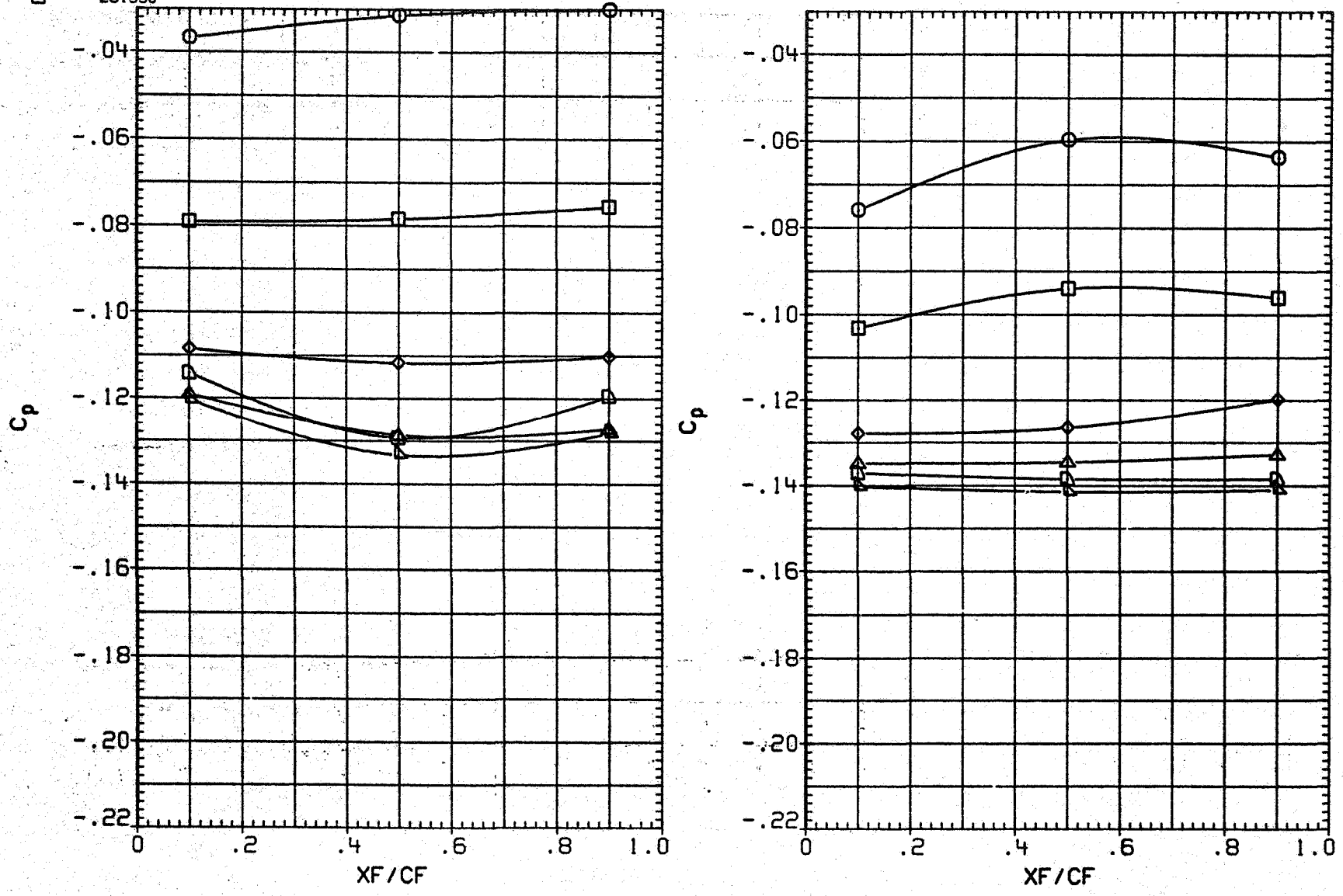


FIG.85 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2H102) AMES 118-1-11 0A145C 01

FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.534	3.001
□	3.882	.615	
◇	9.949		
◁	15.195		
△	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

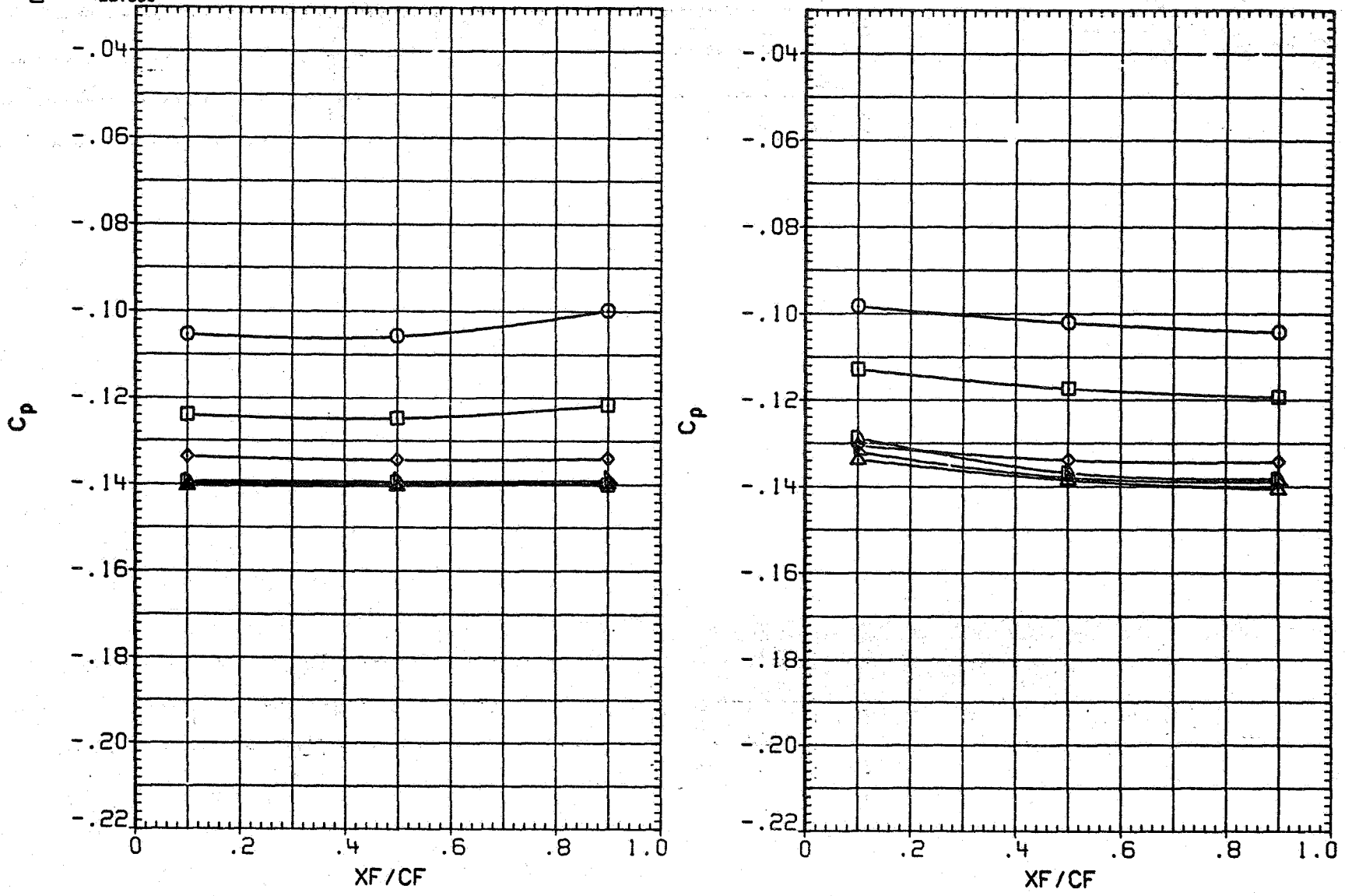


FIG.85 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2H102) AMES 118-1-11 0A145C 01

FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.020	.340	3.498
□	4.642	.427	
◇	9.674		
△	14.765		
⊿	19.824		
D	25.034		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

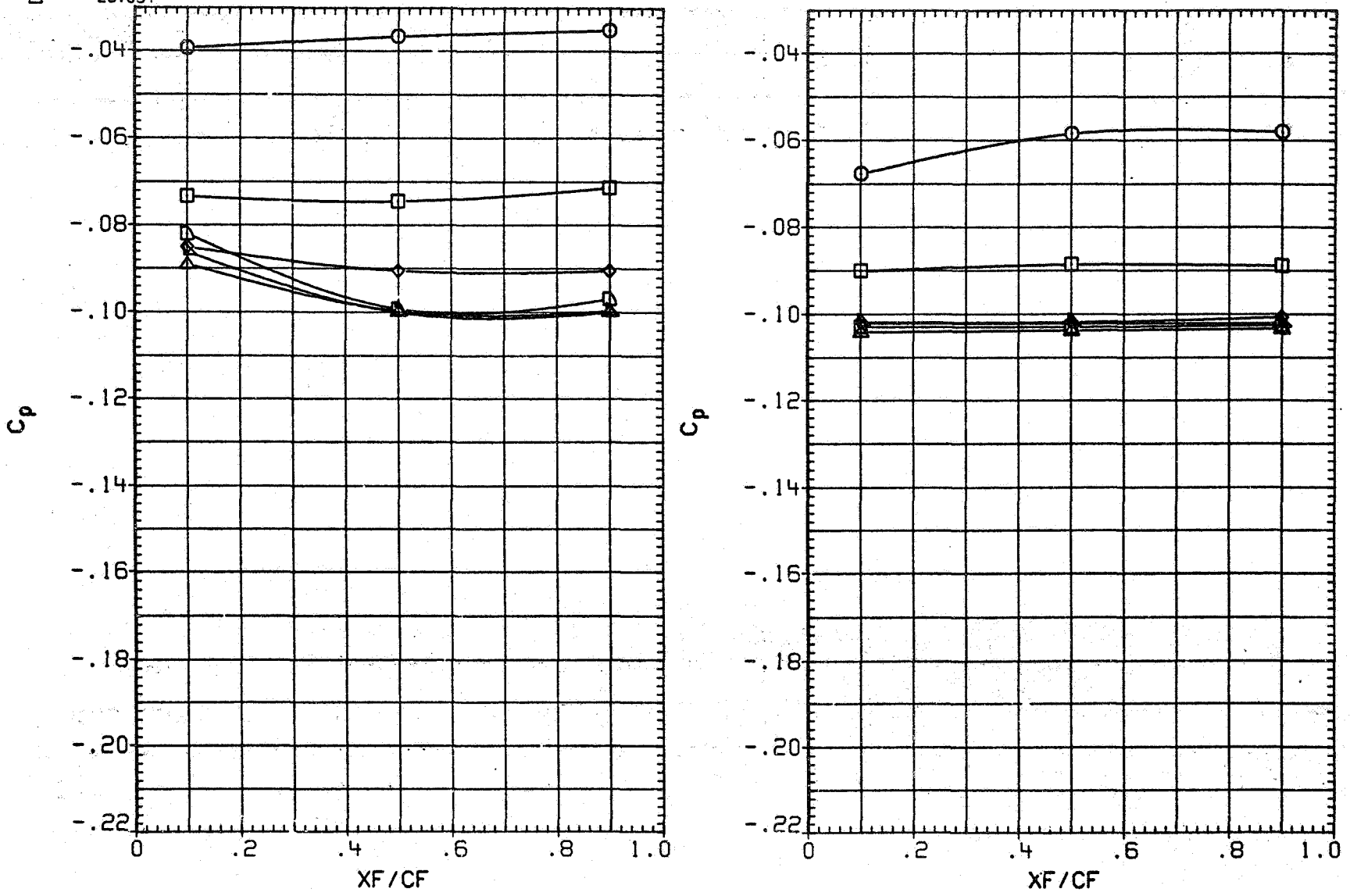


FIG.85 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HI02) AMES 118-1-11 OA145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.020	.534	3.498
□	4.642	.615	
◇	9.674		
◁	14.765		
△	19.824		
D	25.034		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPOBRK	55.000	RUDDER	.000
N/L	2.500		

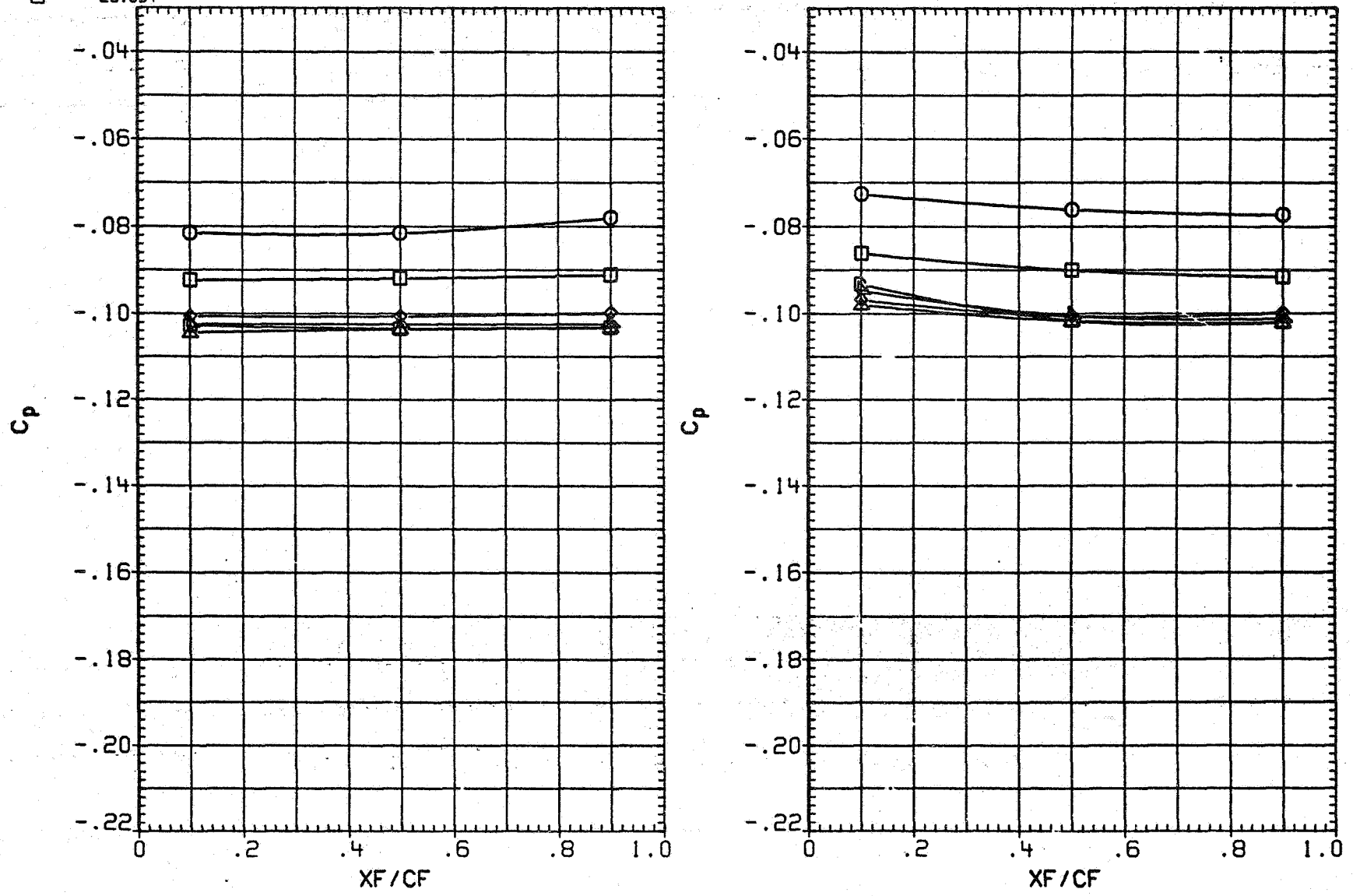


FIG.85 OA145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2H120) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.938	.340	2.493
□	-9.941	.427	
◇	-4.920		
△	.028		
◁	5.036		
▷	10.016		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

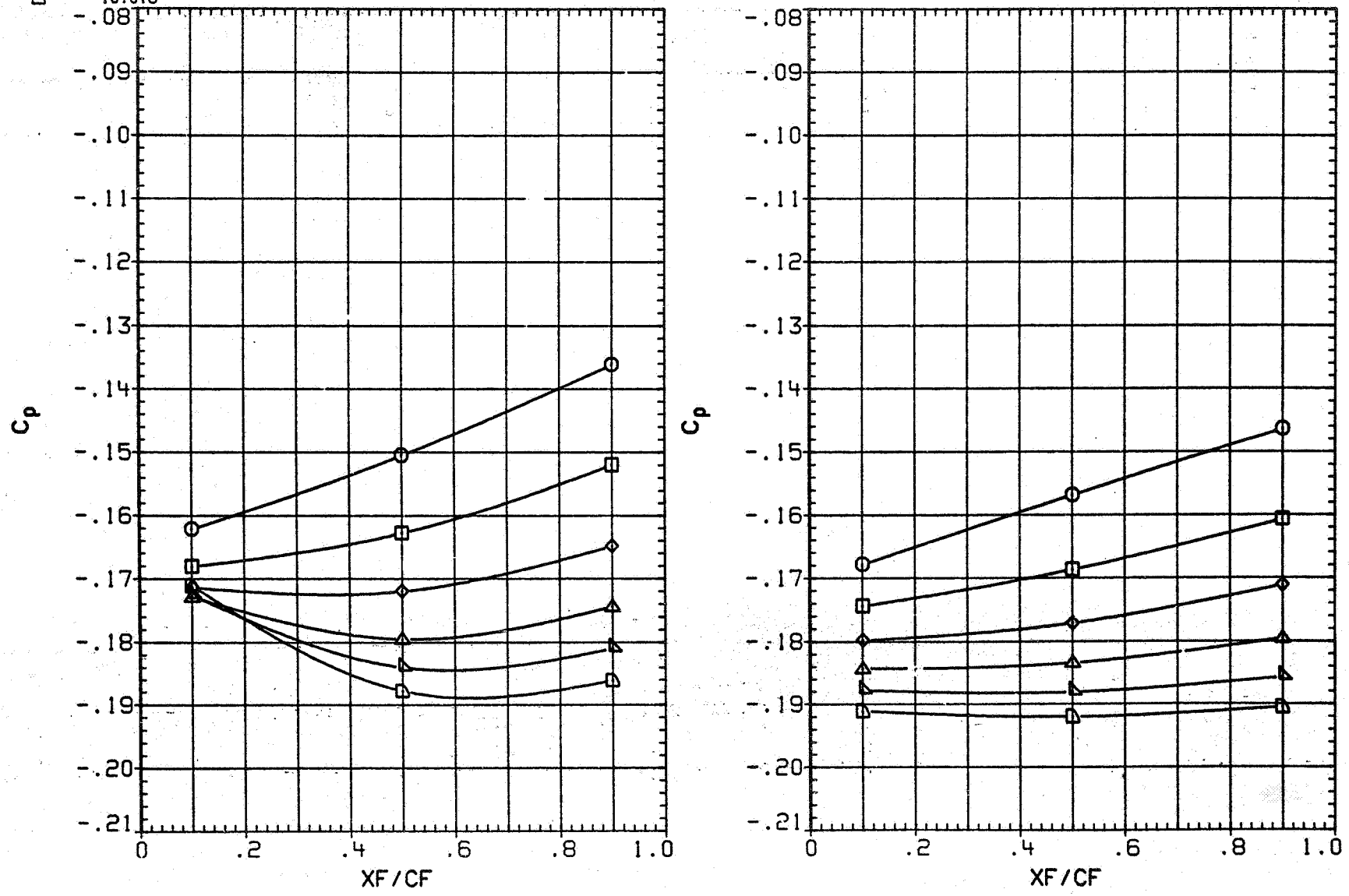


FIG.86 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

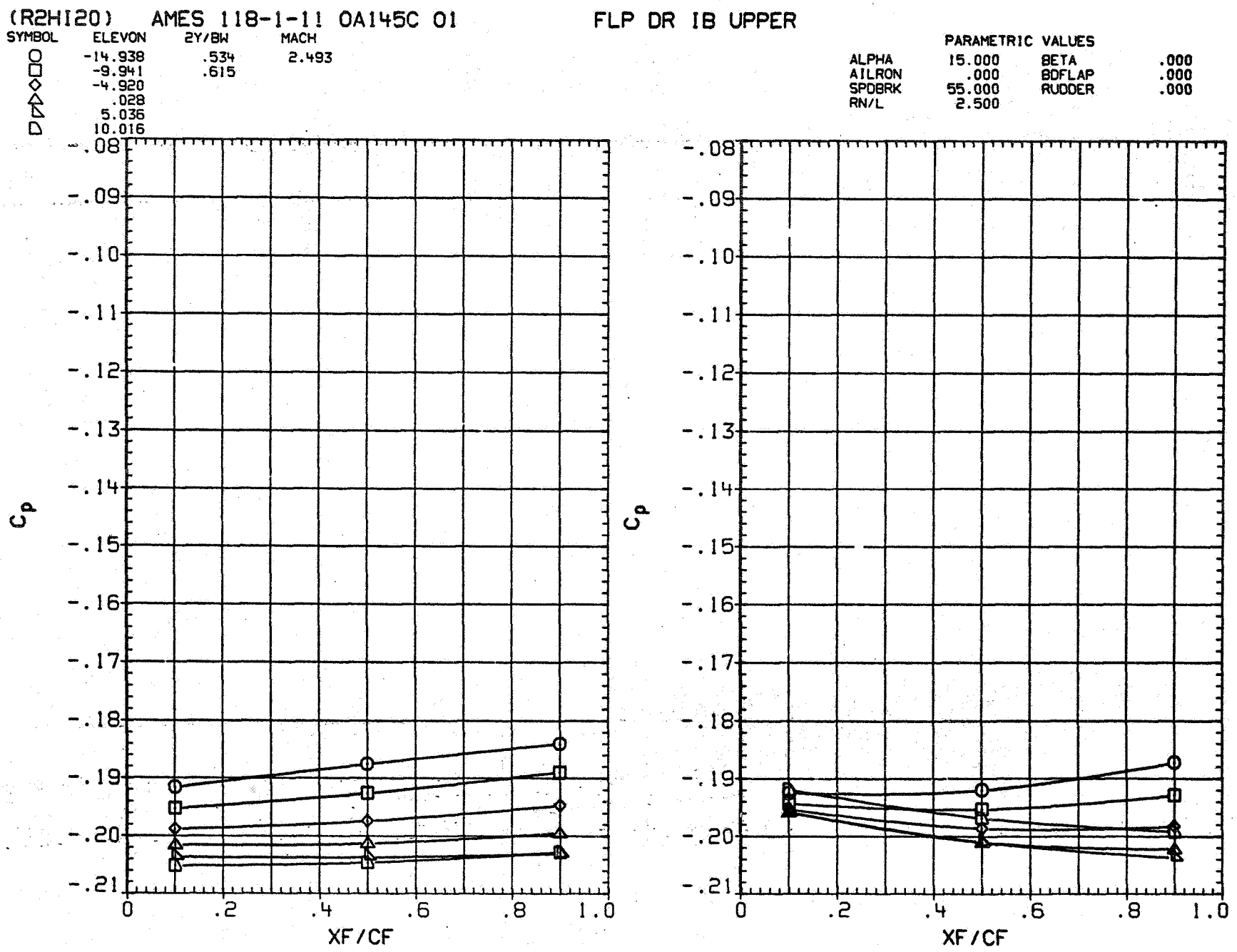


FIG.86 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2H120) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.966	.340	3.000
□	-9.946	.427	
◇	-4.933		
△	.041		
▽	5.002		
◁	10.026		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

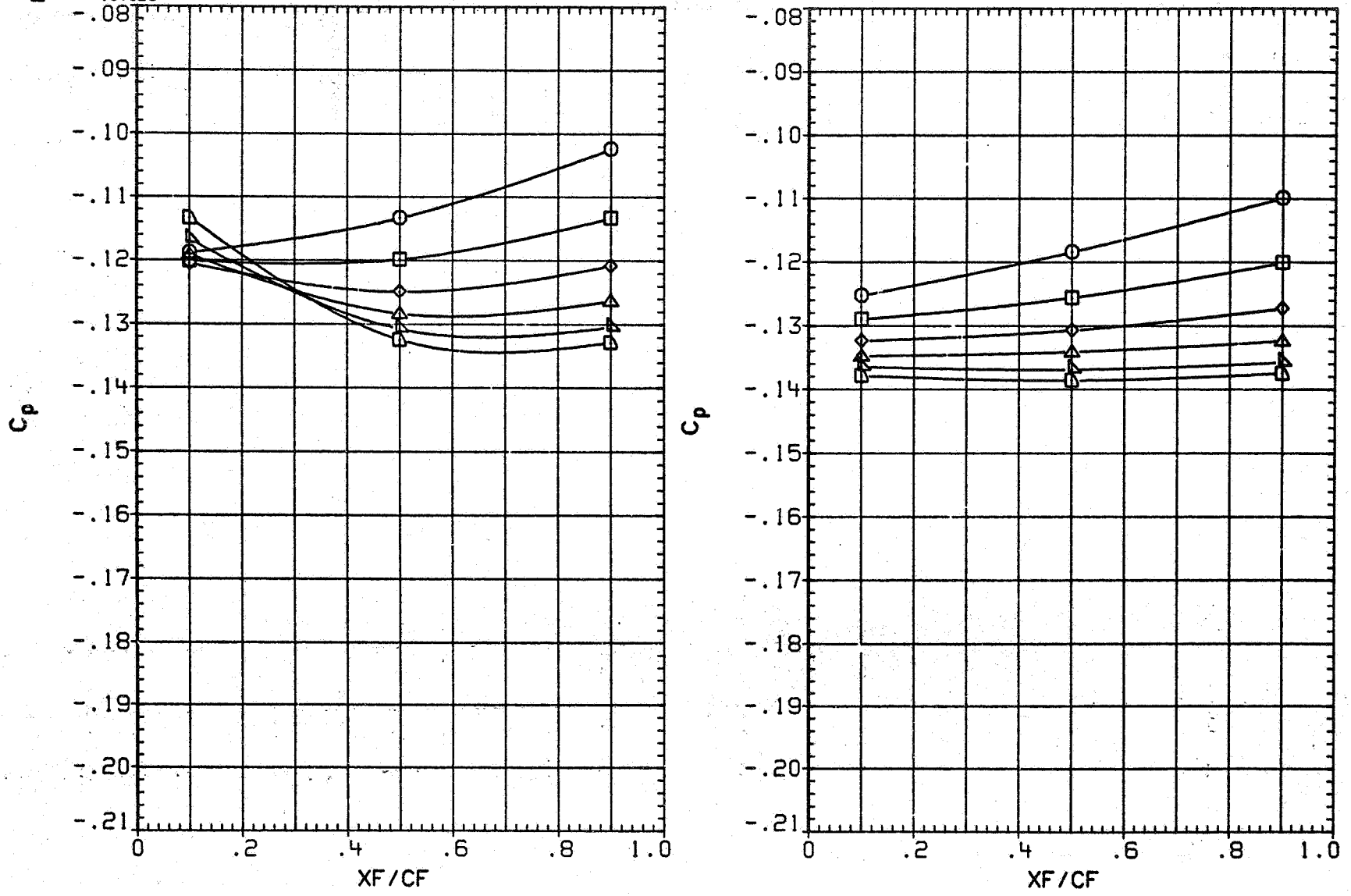


FIG.86 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2H120) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.966	.534	3.000
□	-9.946	.615	
◇	-4.933		
△	.041		
▽	5.002		
D	10.026		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

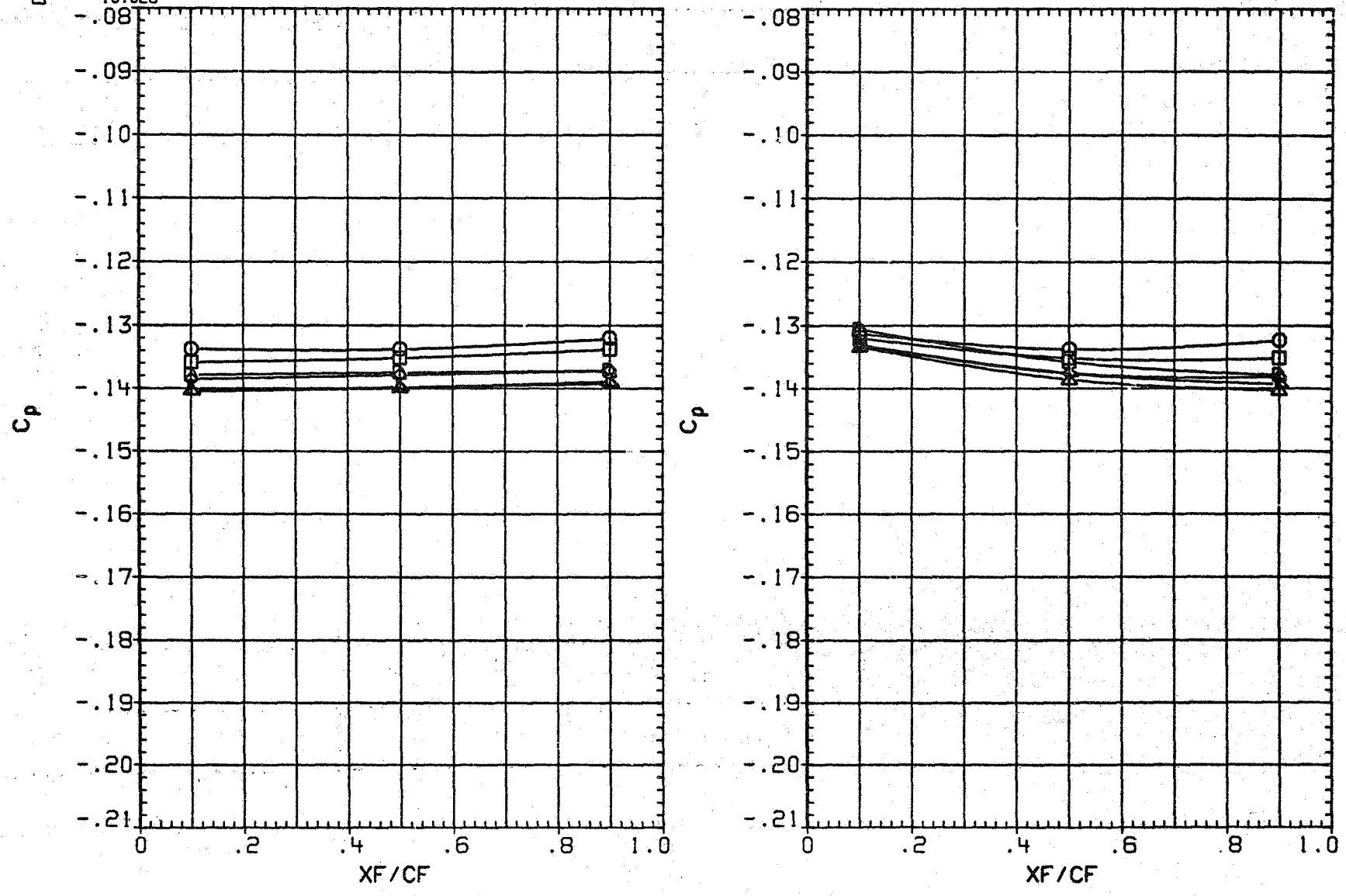


FIG.86 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HI20) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.935	.340	3.498
□	-9.941	.427	
◇	-4.943		
△	.029		
▷	5.039		
D	10.019		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

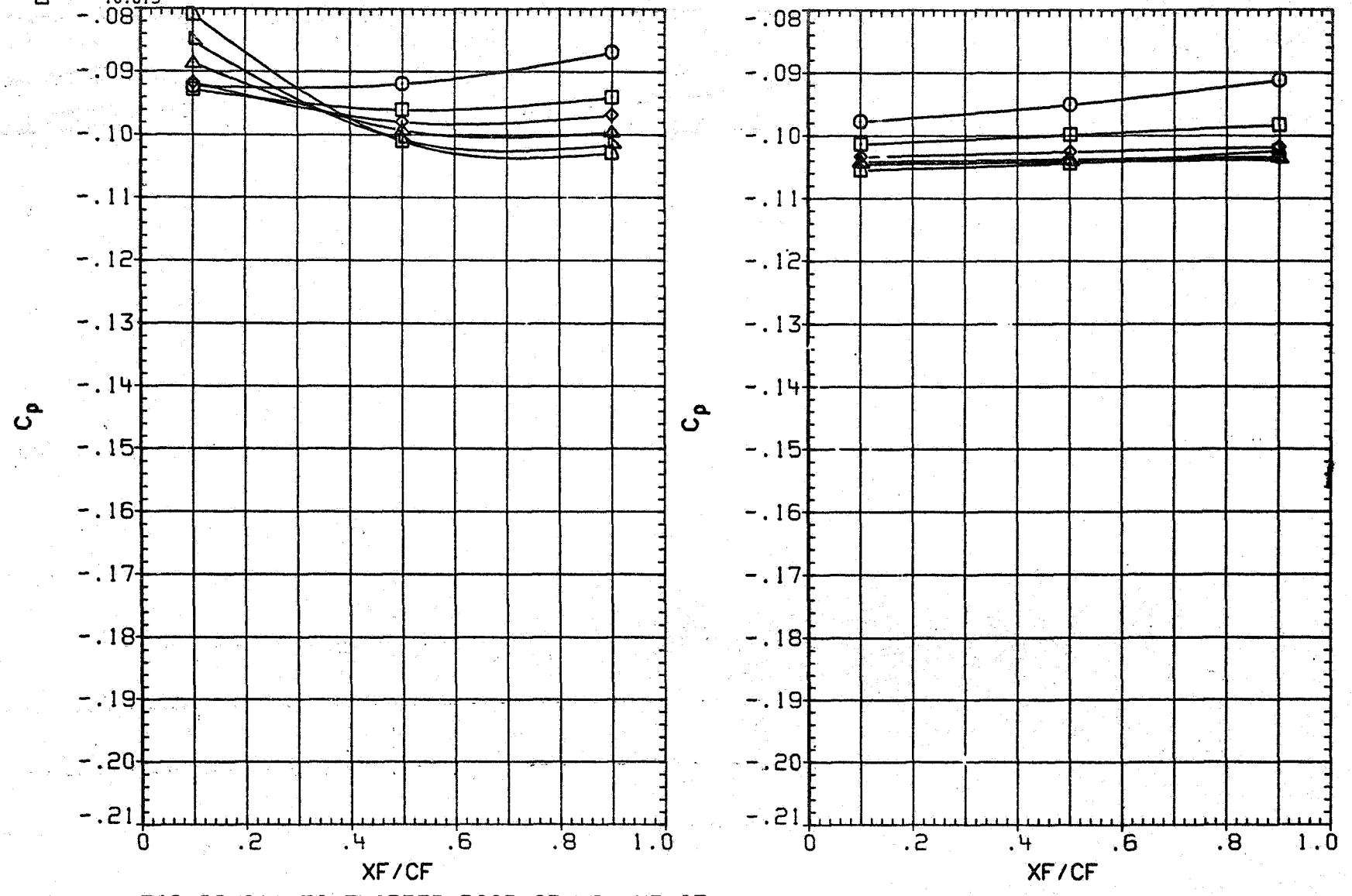


FIG.86 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2H120) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.935	.534	3.498
□	-9.941	.615	
◇	-4.943		
◁	.029		
△	5.039		
▷	10.019		

PARAMETRIC VALUES

ALPHA	15 000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

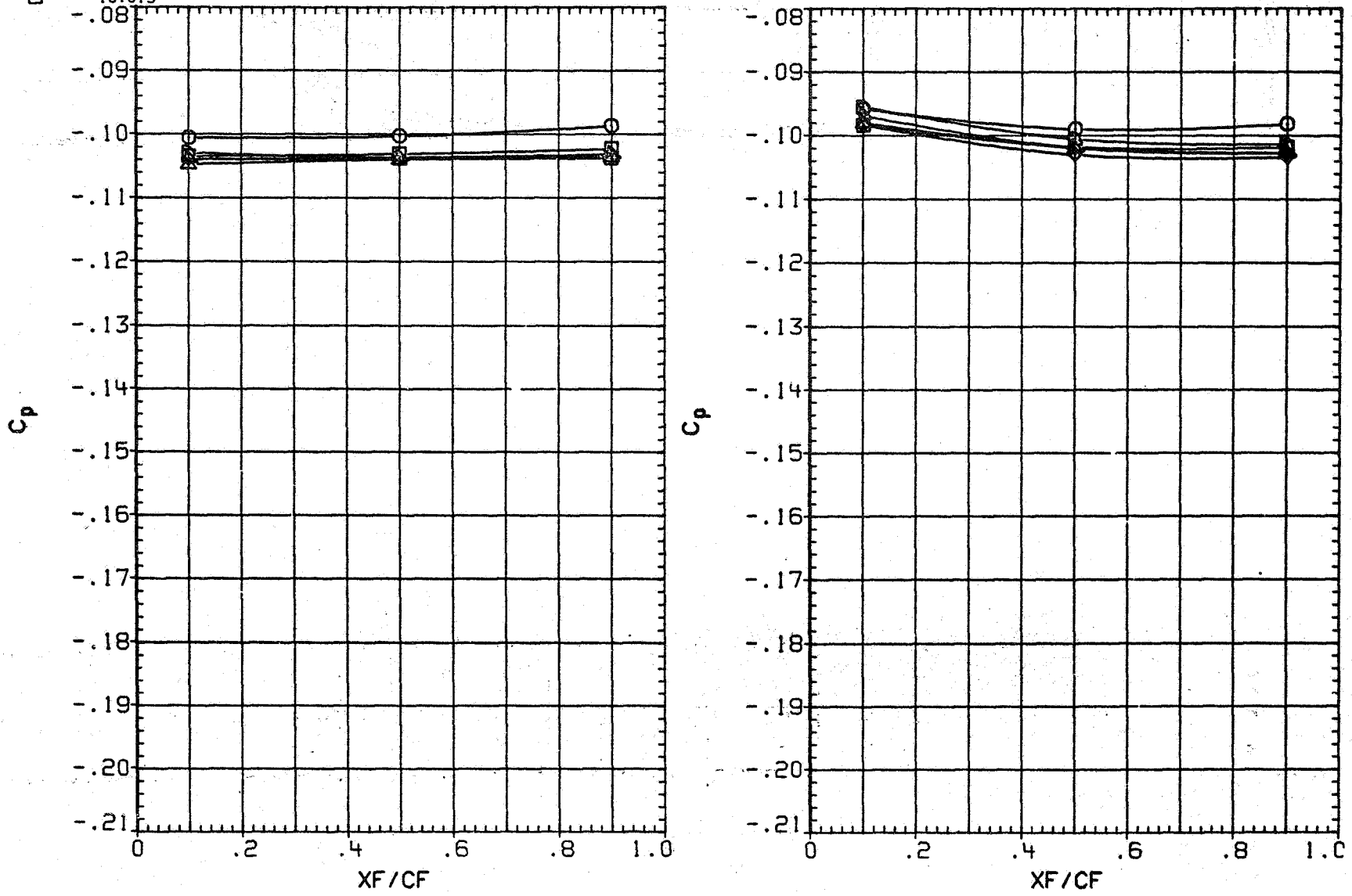


FIG.86 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HI13) AMES 118-1-11 OA145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.340	3.000
□	4.933	.427	
◇	10.065		
△	15.160		
◁	20.226		
▷	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

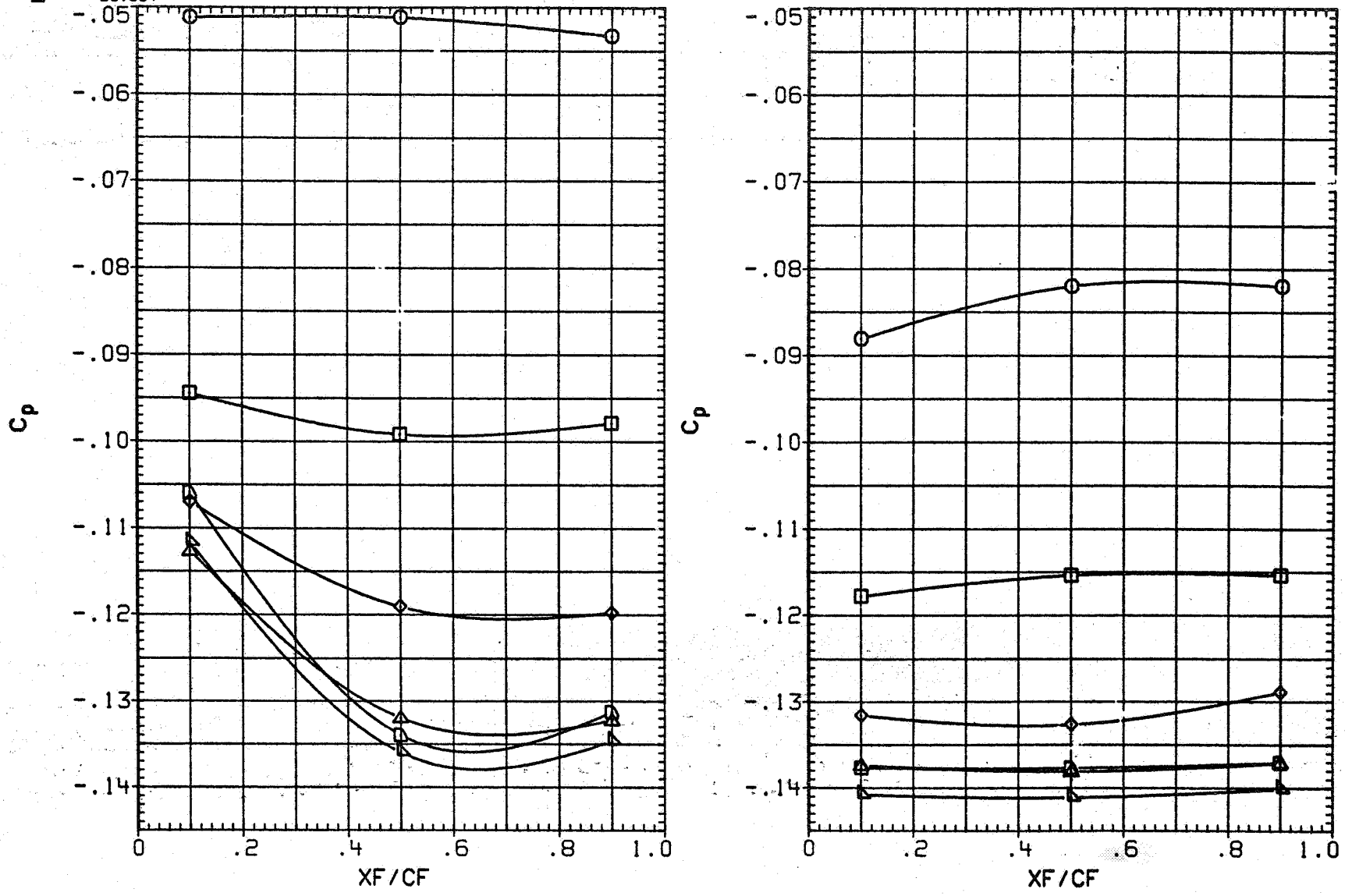


FIG.87 OA145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HI13) AMES 118-1-11 OA145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.534	3.000
□	4.933	.615	
◇	10.065		
◁	15.160		
△	20.226		
▷	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

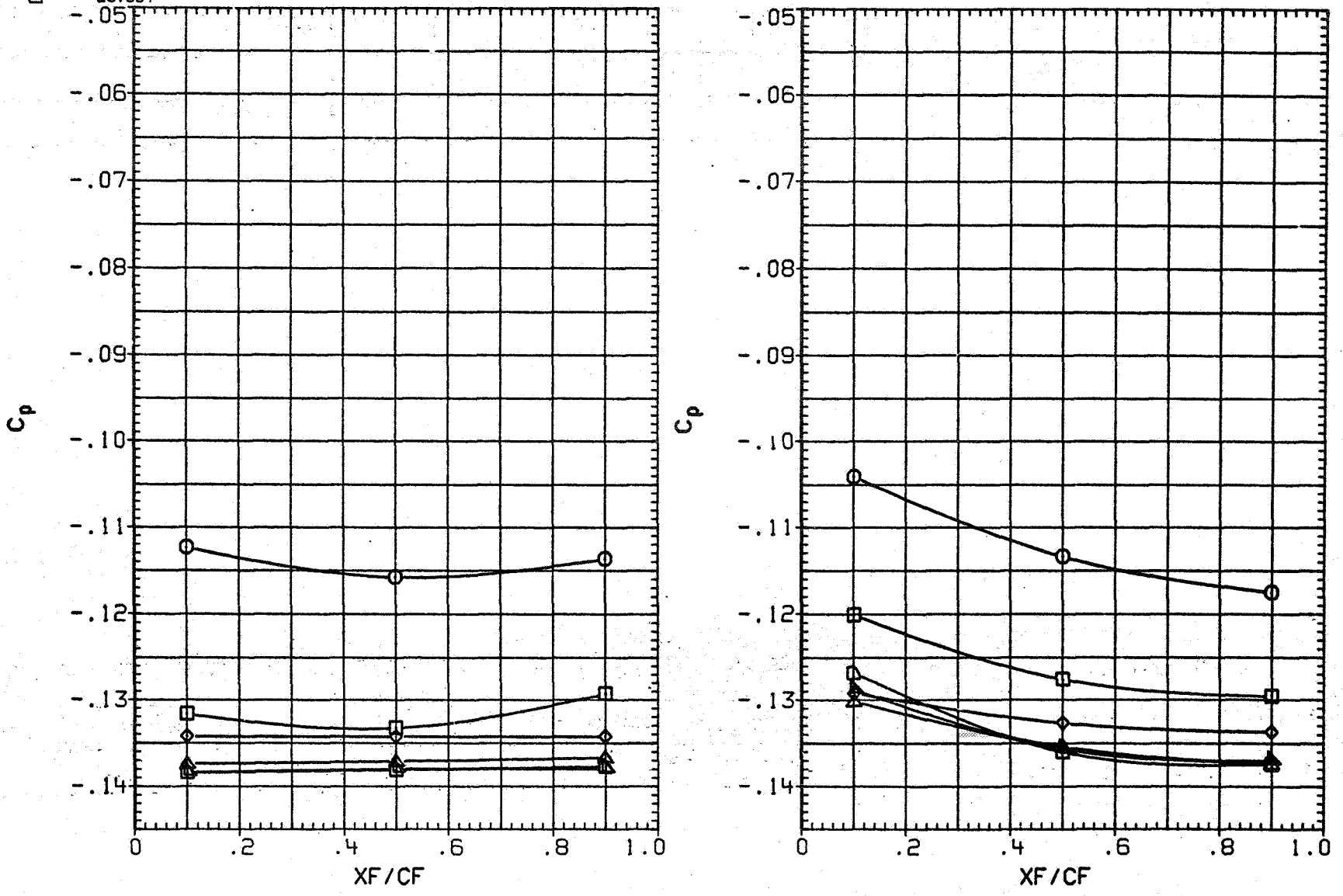


FIG.87 OA145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2H116) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.189	.340	3.001
□	5.024	.427	
◇	10.117		
△	15.226		
▷	20.285		
D	25.372		

PARAMETRIC VALUES

BETA	.000	ELEVON	-10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

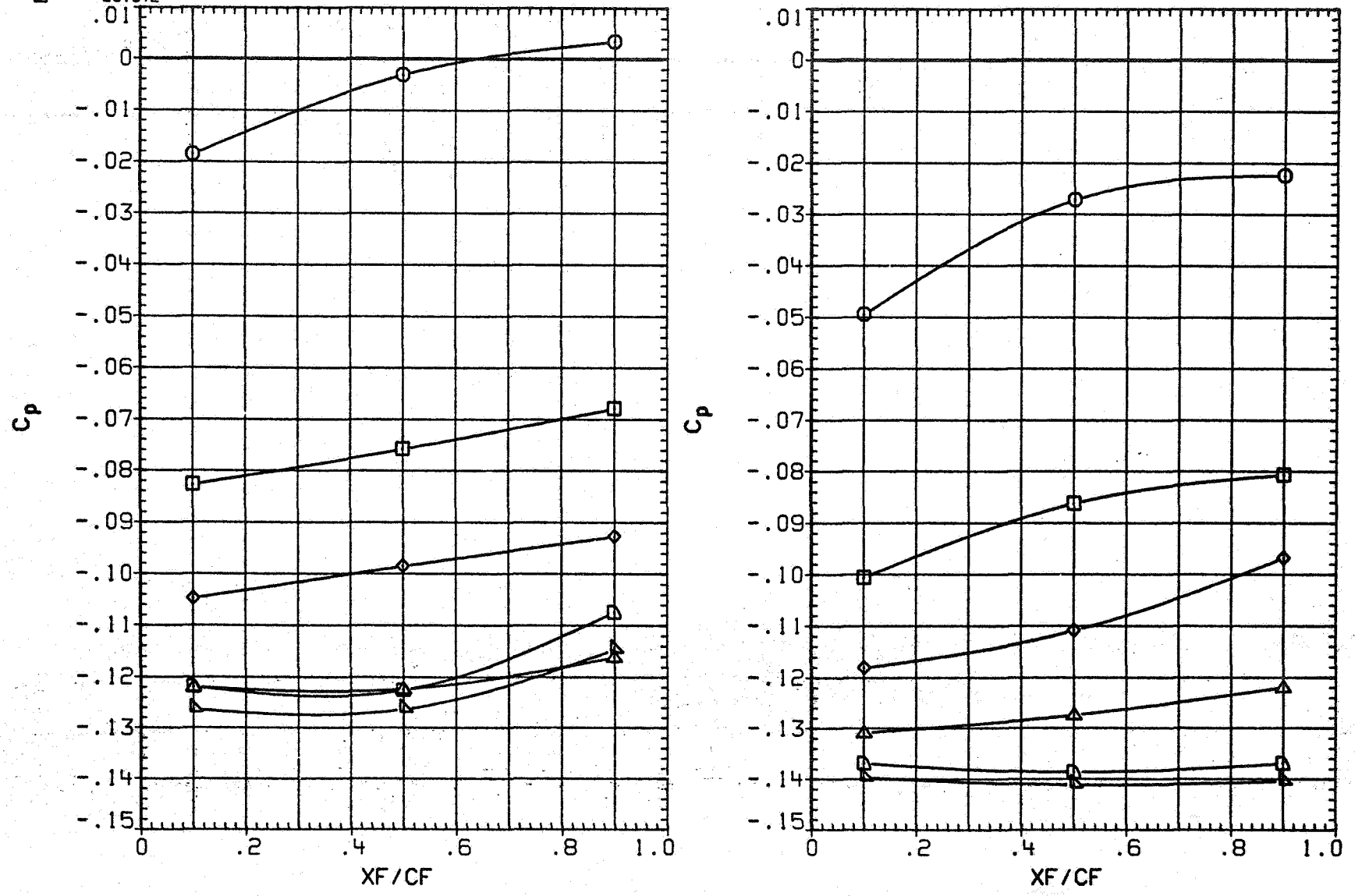


FIG.88 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

(R2H116) AMES 118-1-11 OA145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.189	.534	3.001
□	5.024	.615	
◇	10.117		
△	15.226		
◁	20.285		
▷	25.372		

PARAMETRIC VALUES

BETA	.000	ELEVON	-10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

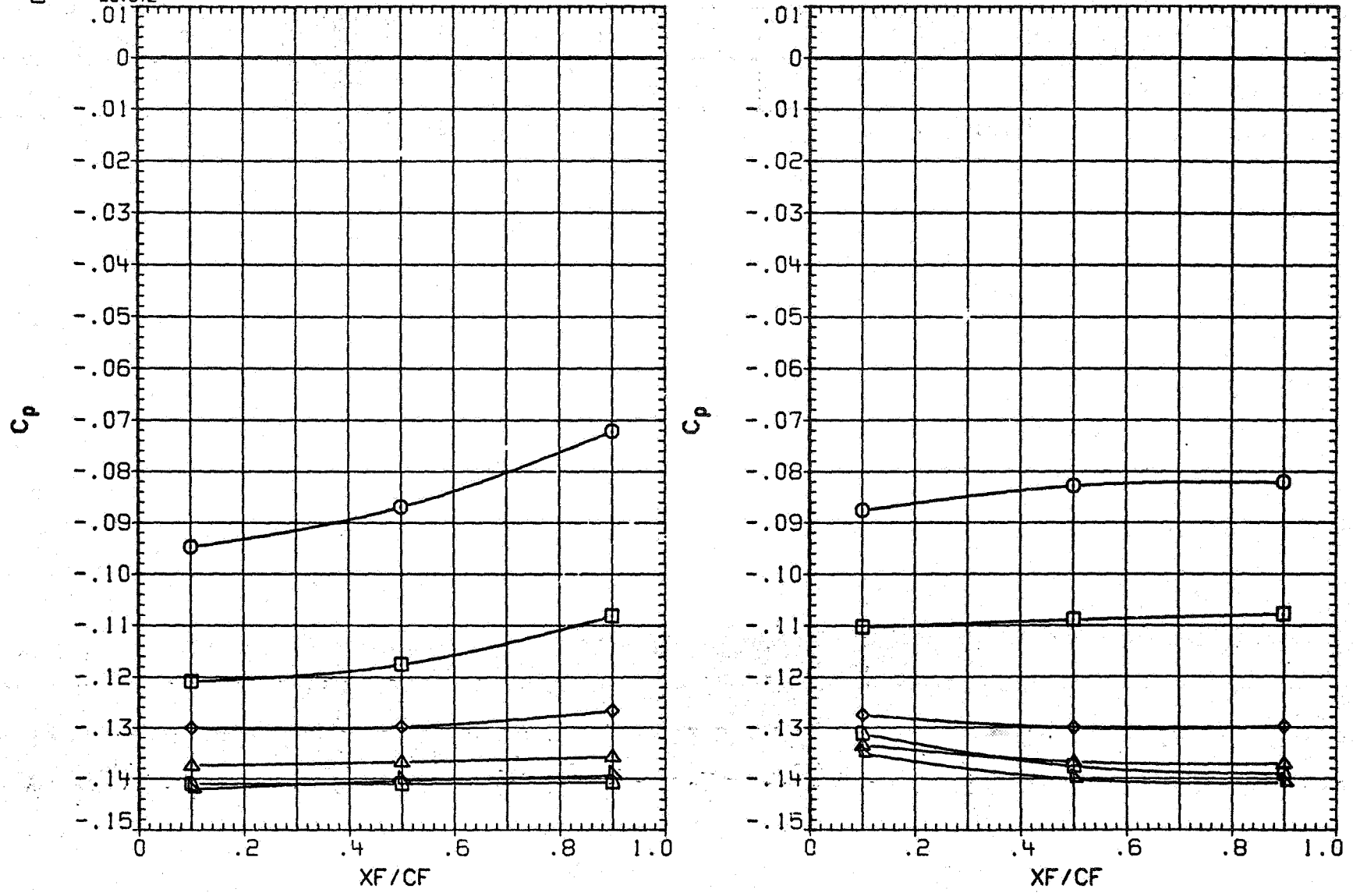


FIG.88 OA145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

(R2H114) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.181	.340	3.000
□	4.954	.427	
◇	10.066		
△	15.156		
◁	20.228		
▷	25.389		

PARAMETRIC VALUES

BETA	.000	ELEVON	20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

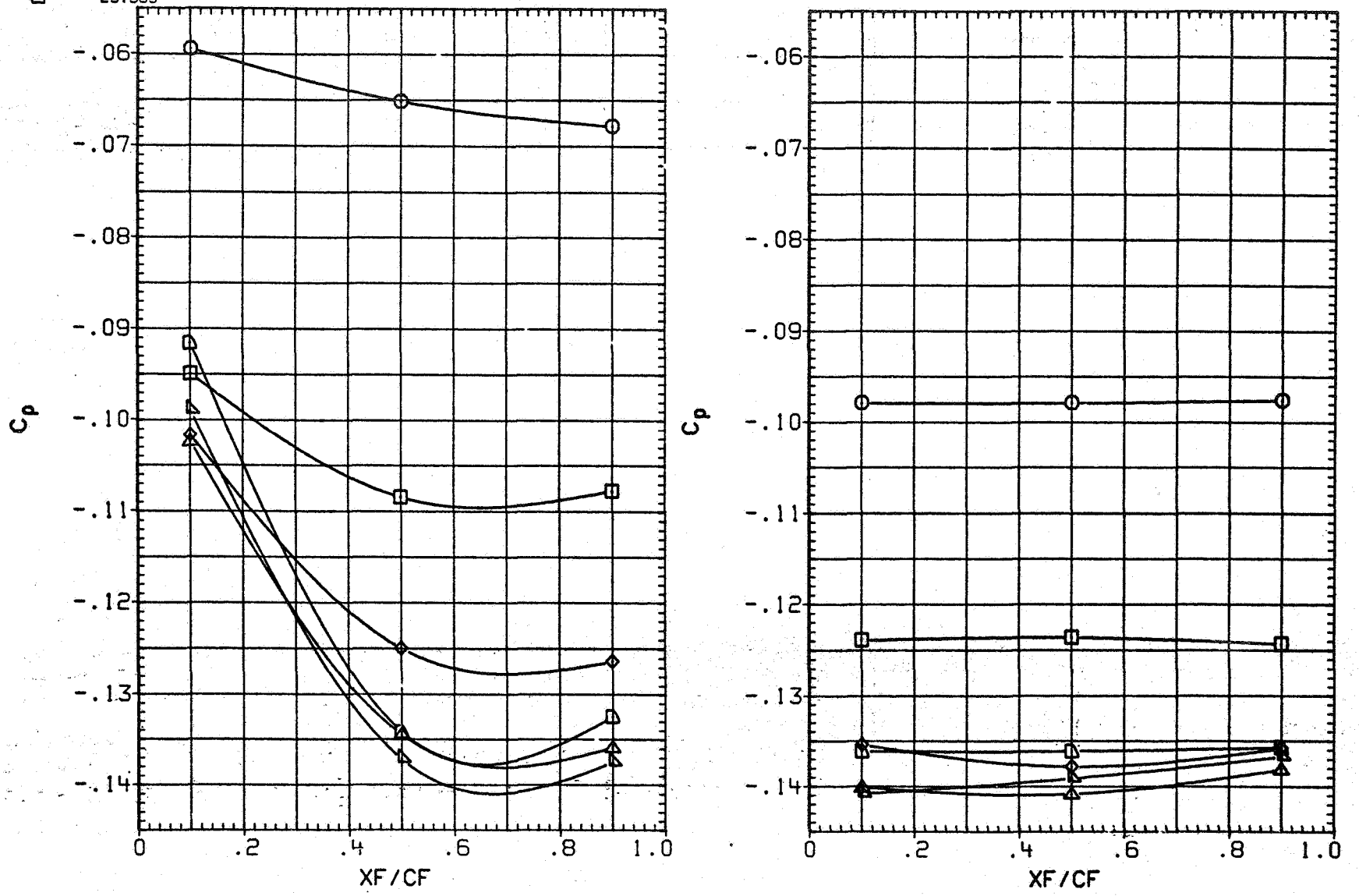


FIG.89 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

(R2H114) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.181	.534	3.000
□	4.954	.615	
◇	10.066		
△	15.156		
⊿	20.228		
▱	25.389		

PARAMETRIC VALUES

BETA	.000	ELEVON	20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

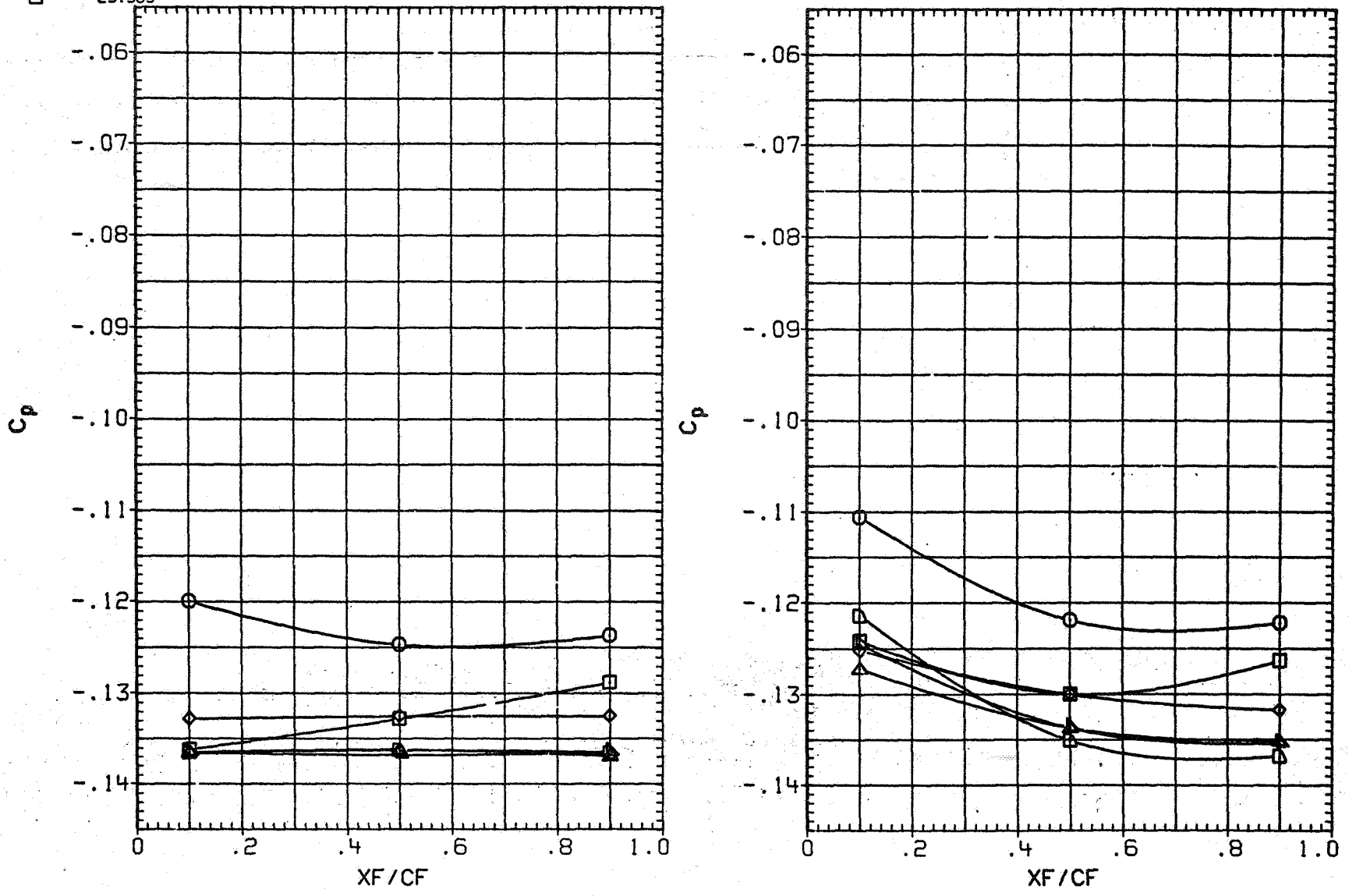


FIG.89 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

(R2H117) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.180	.340	3.001
□	5.058	.427	
◇	10.092		
△	15.201		
◁	20.272		
▷	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

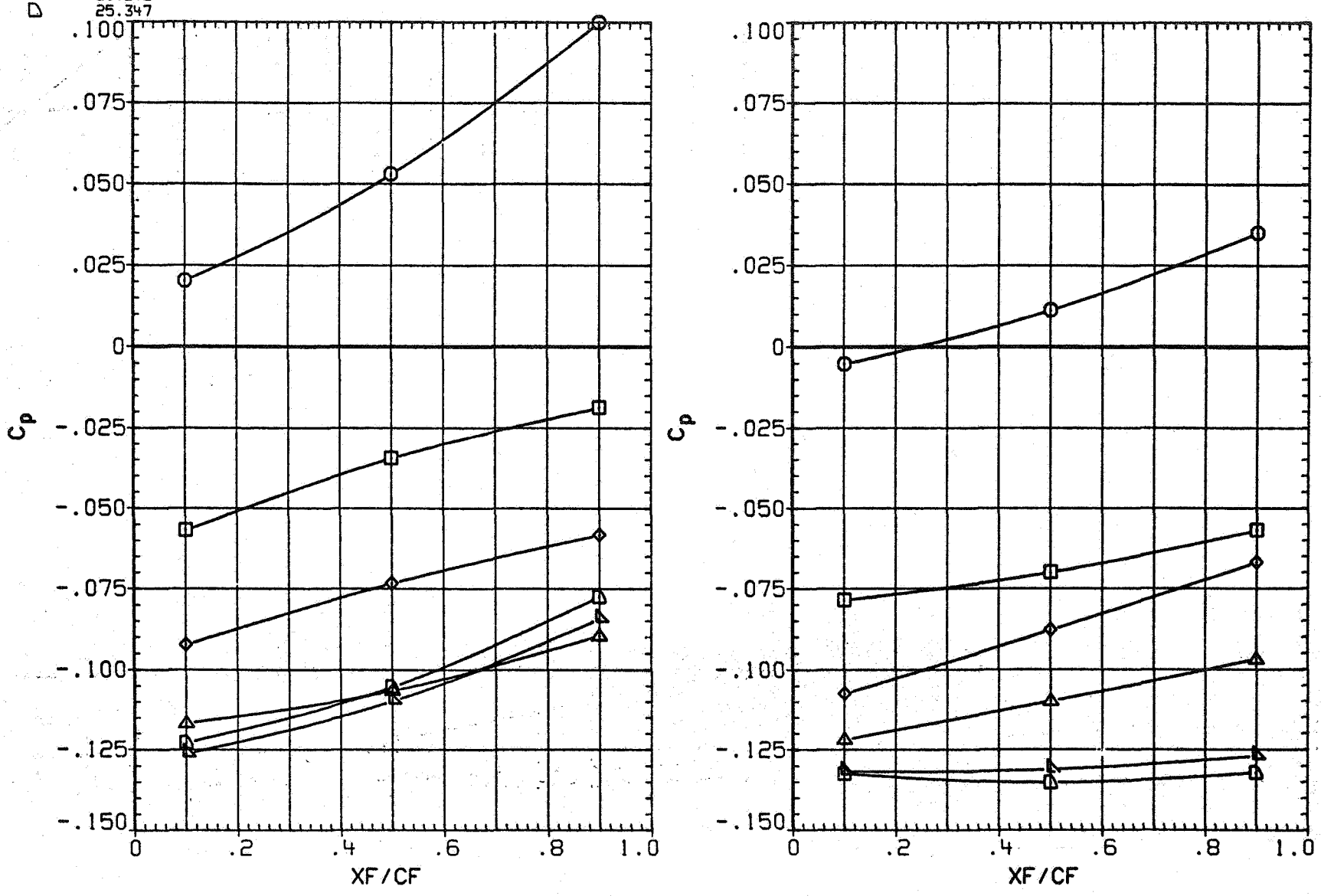


FIG.90 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

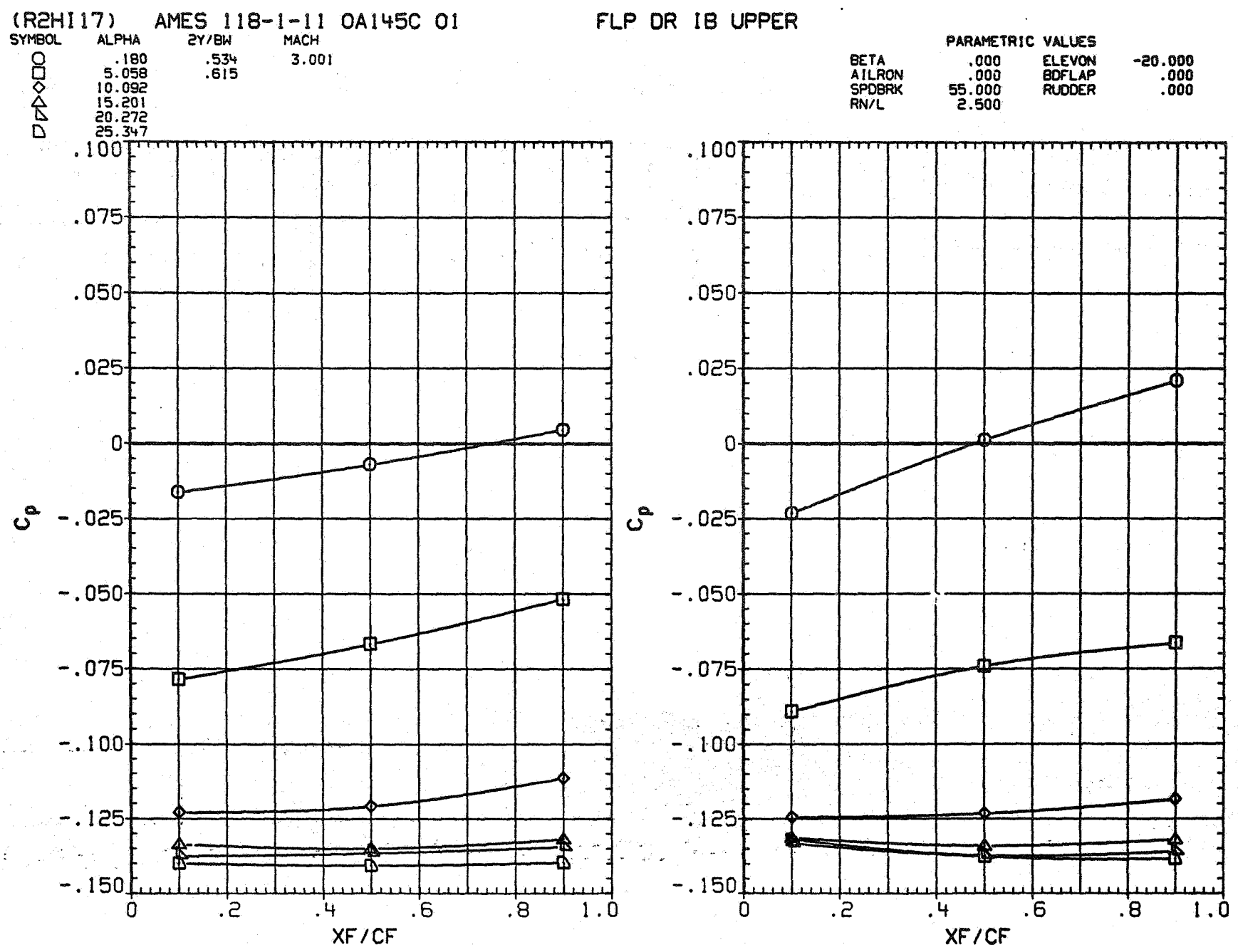


FIG.90 OA145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

(R2H118) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.183	.340	3.001
□	5.026	.427	
◇	10.092		
△	15.197		
◁	20.276		
D	25.519		

PARAMETRIC VALUES

BETA	.000	ELEVON	-35.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

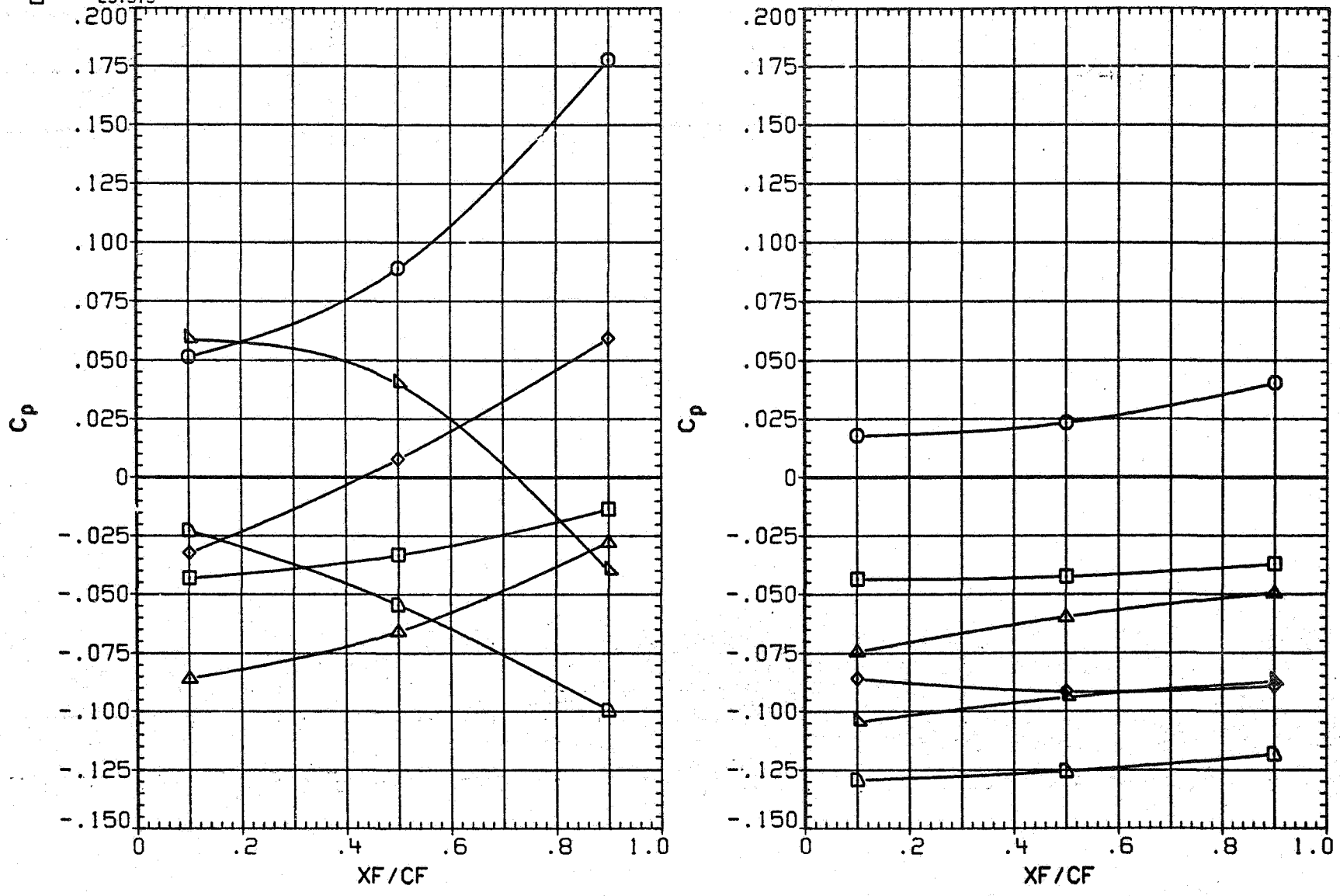


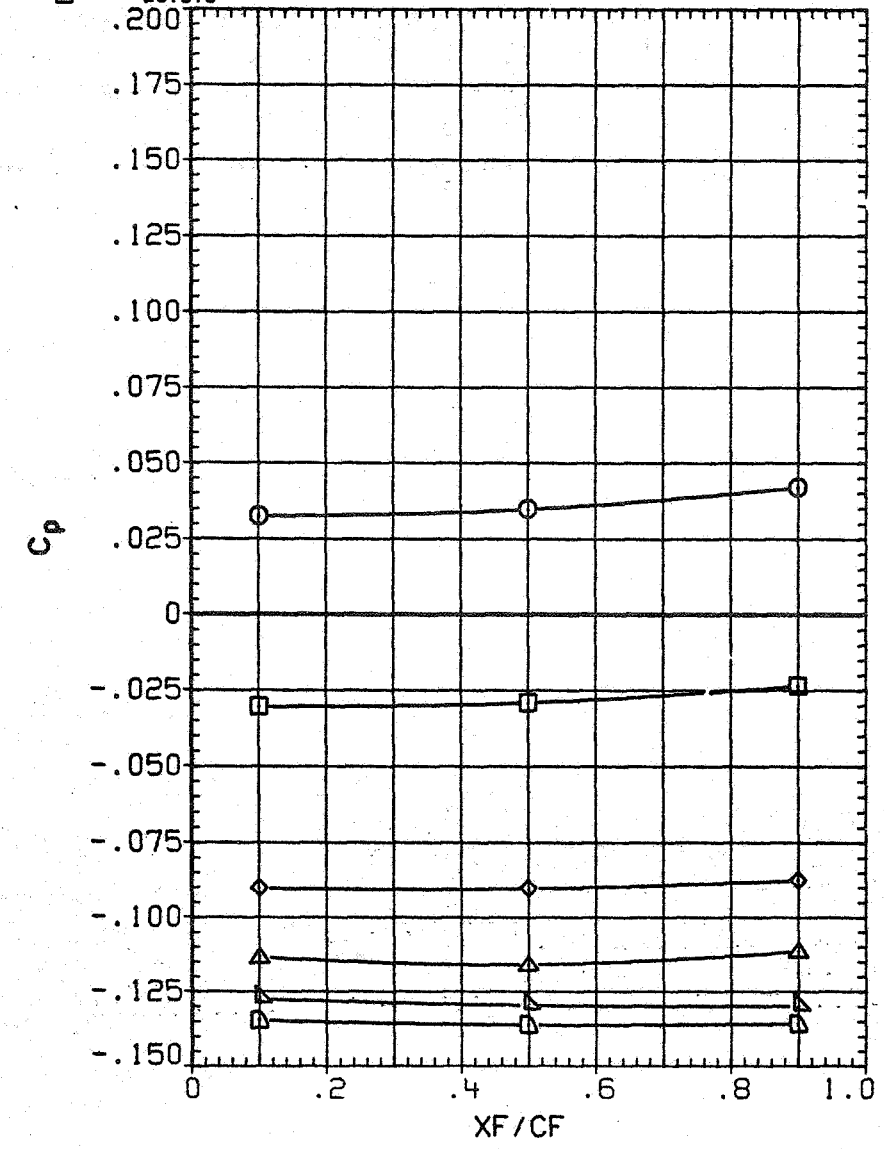
FIG.91 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

(R2H118) AMES 118-1-11 0A145C 01 FLP DR IB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.183	.534	3.001
□	5.026	.615	
◇	10.092		
△	15.197		
◁	20.276		
▷	25.519		

PARAMETRIC VALUES

BETA	.000	ELEVON	-35.000
AILRON	.000	BDFLAP	.000
SPOBRK	55.000	RUDDER	.000
RN/L	2.500		



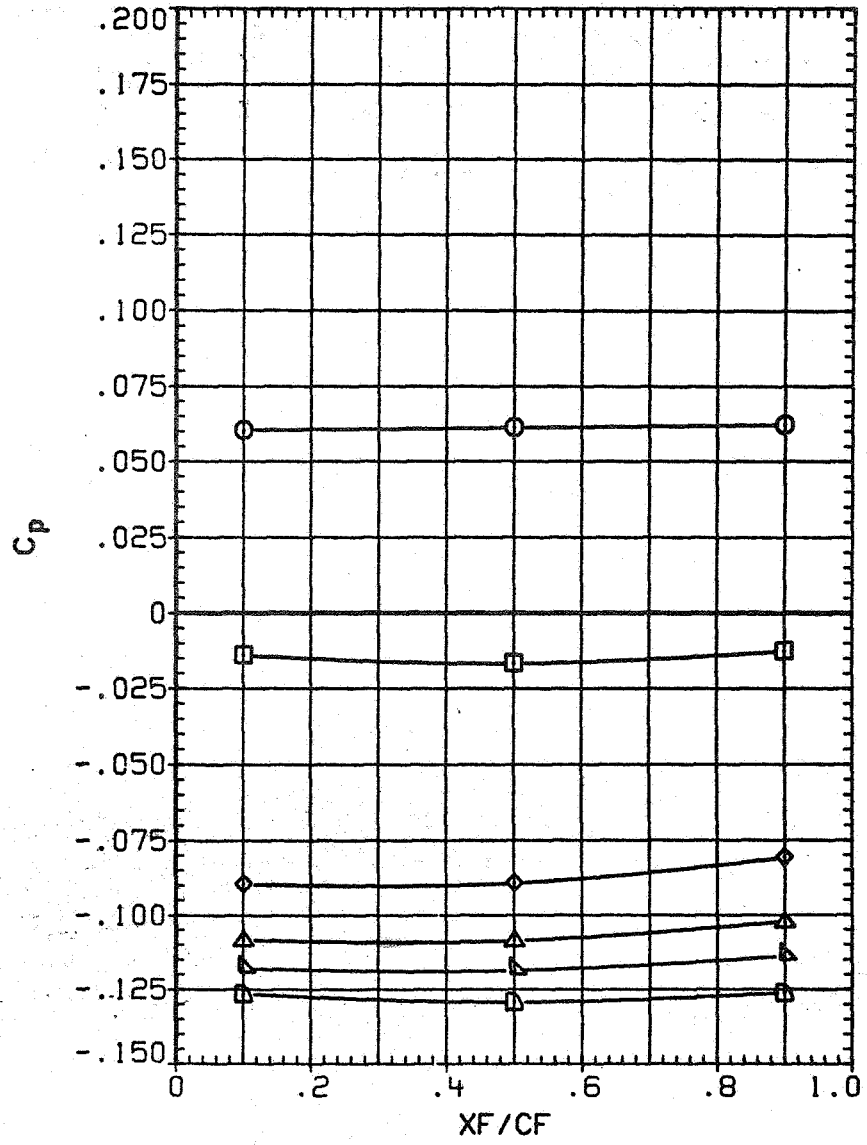


FIG.91 0A145C FLIPPER DOOR CP VS. XF/CF
INBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

(R2HJ02) AMES 118-1-11 0A145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.307	.715	2.493
□	4.010	.800	
◇	10.124		
△	15.236		
◁	20.318		
D	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPOBRK	55.000	RUDDER	.000
RN/L	2.500		

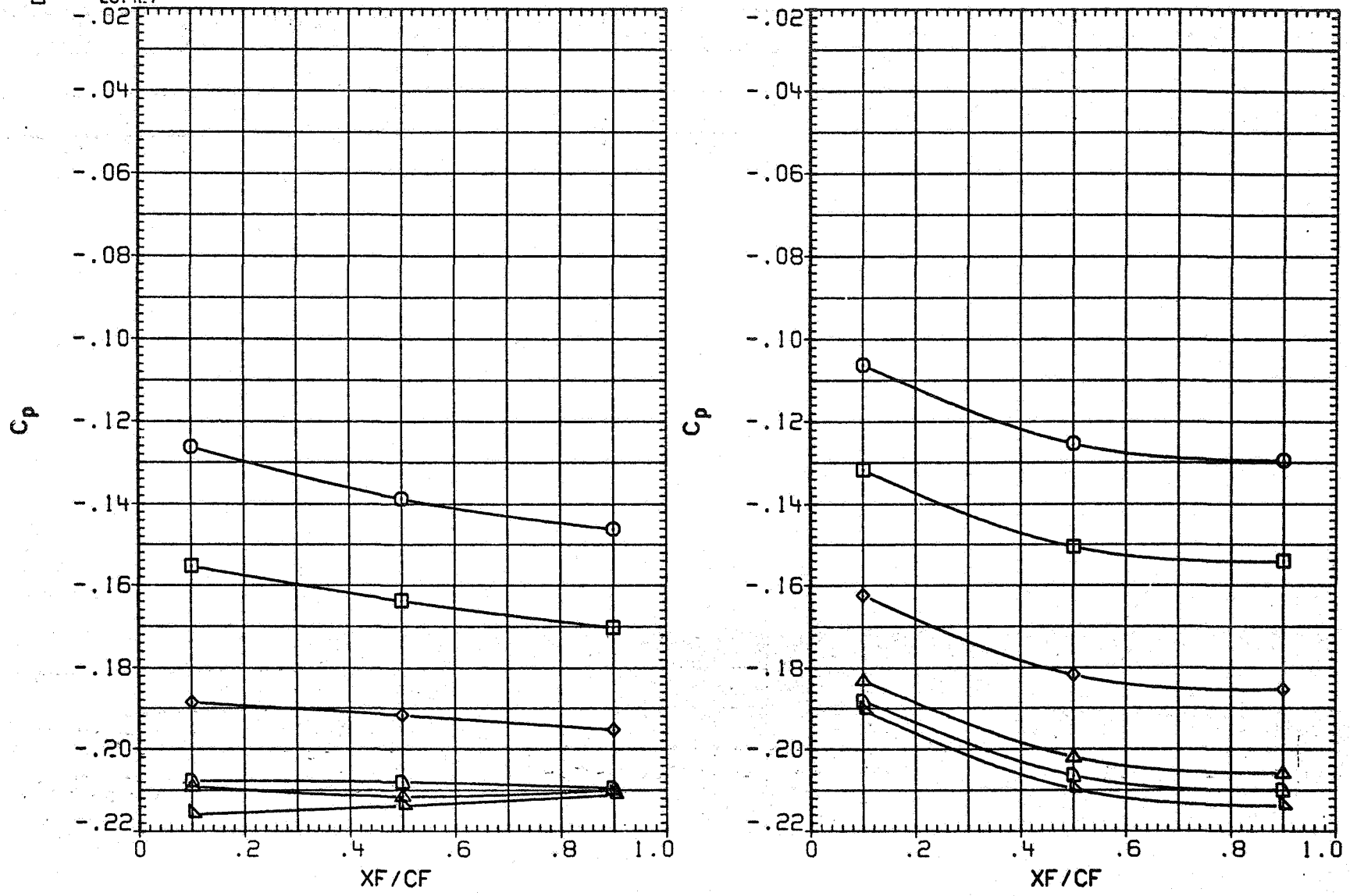


FIG.92 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HJ02) AMES 118-1-11 OA145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.307	.887	2.493
□	4.010	.960	
◇	10.124		
△	15.236		
◁	20.318		
D	26.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

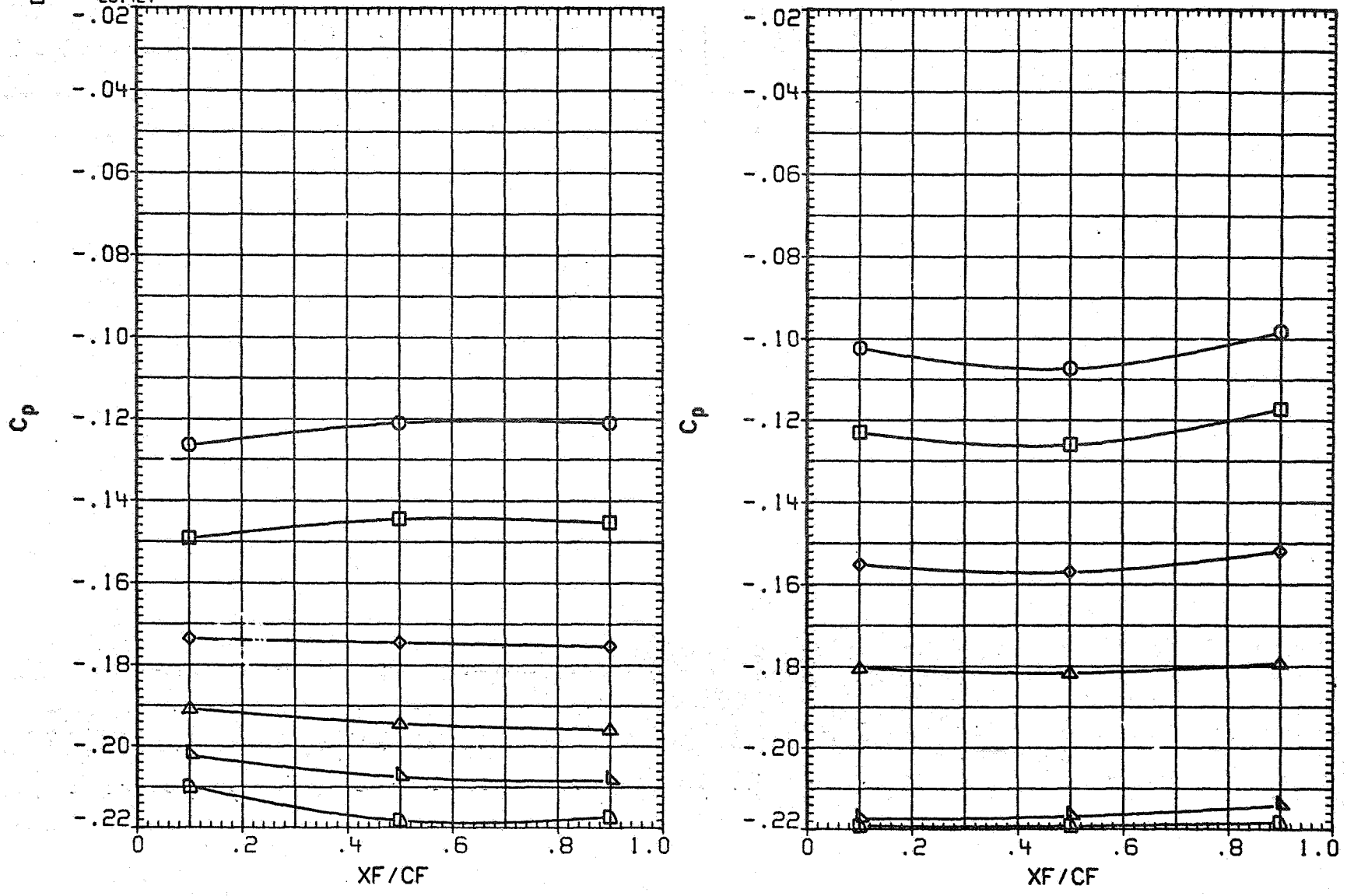


FIG.92 OA145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HJ02) AMES 118-1-11 0A145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.715	3.001
□	3.882	.800	
◇	9.949		
△	15.195		
◁	20.260		
D	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

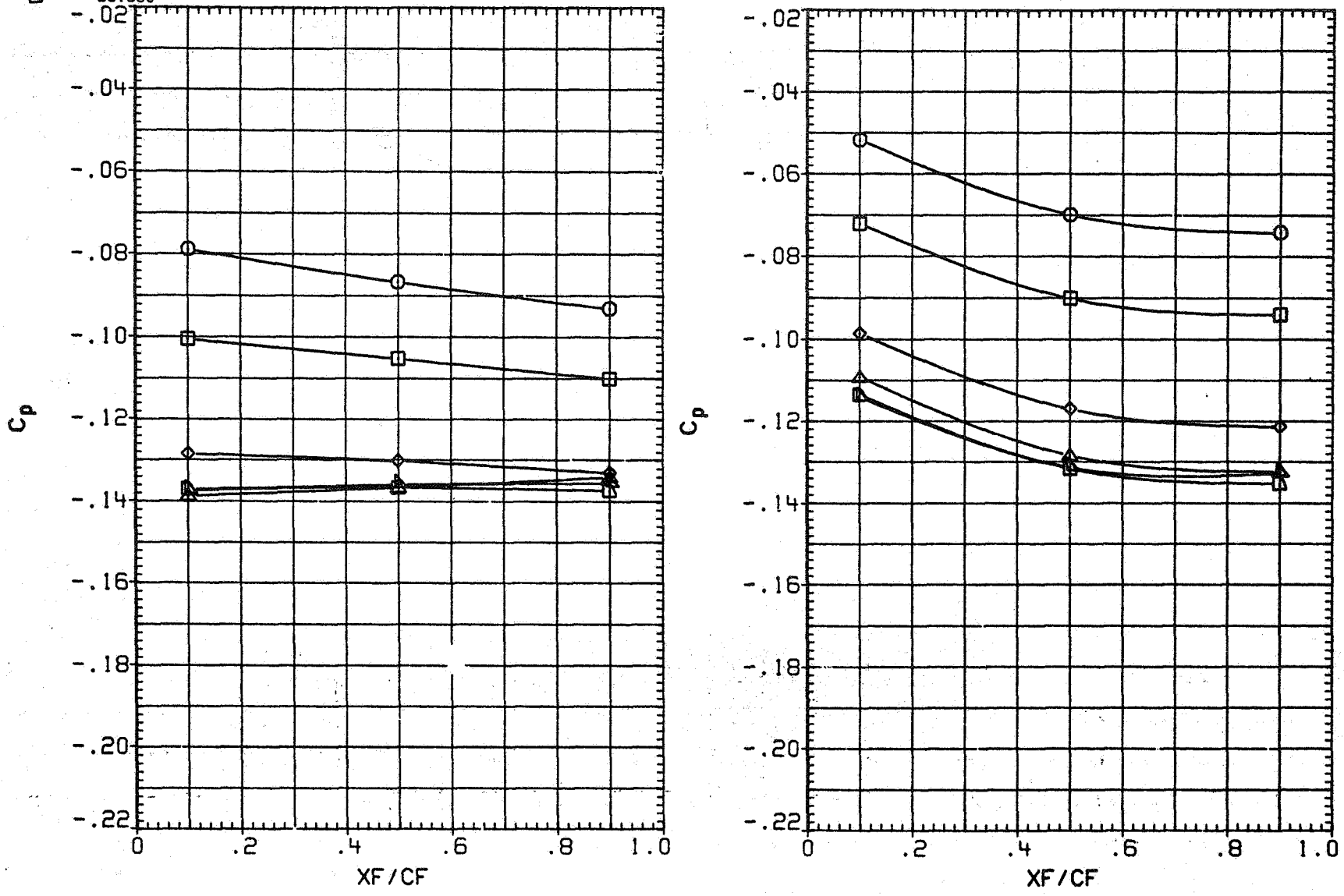


FIG.92 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HJ02) AMES 118-1-11 0A145C 01 FLP DR 0B UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.887	3.001
□	3.882	.960	
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

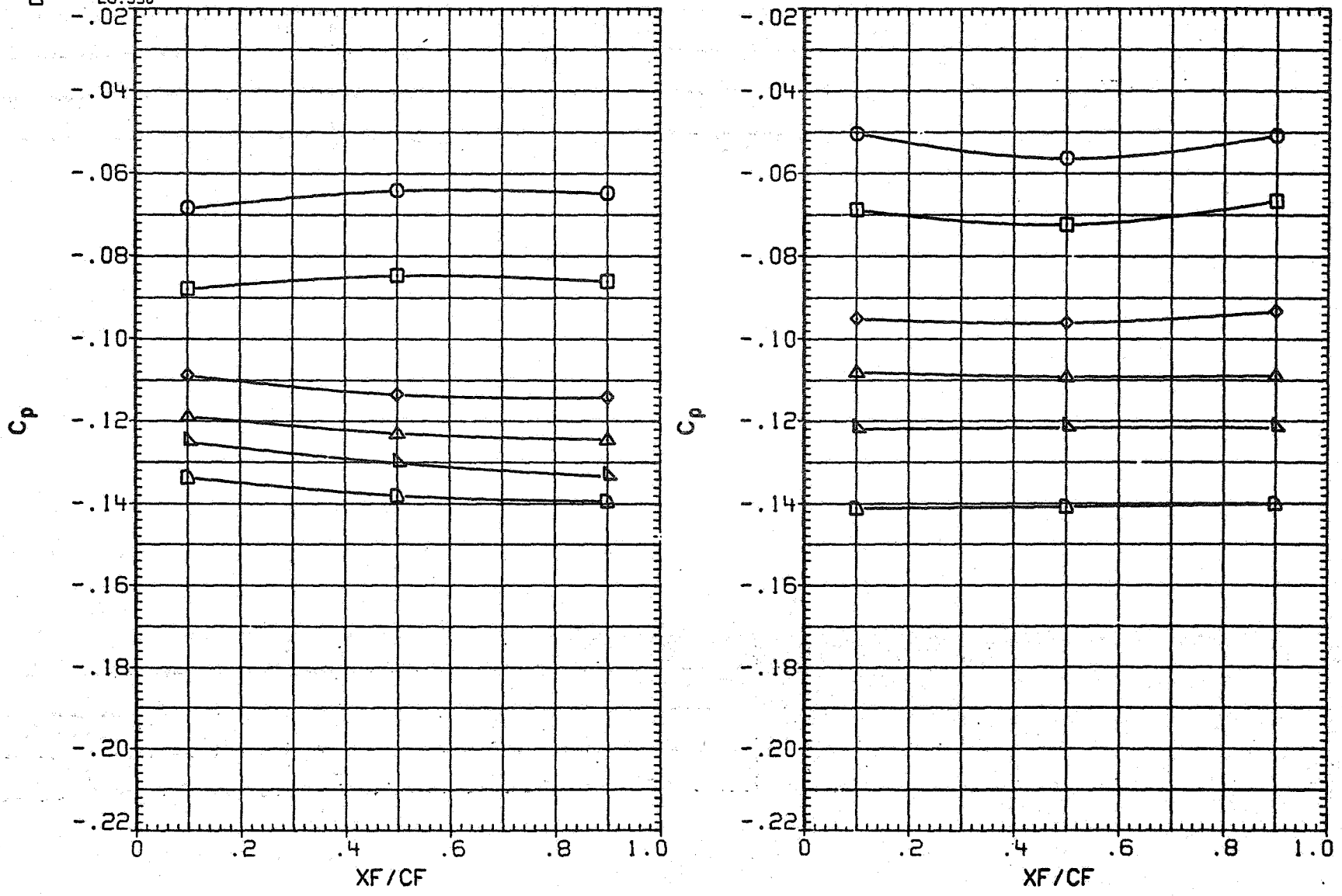


FIG.92 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HJ02) AMES 118-1-11 0A145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.020	.715	3.498
□	4.642	.800	
◇	9.674		
△	14.765		
▷	19.824		
▽	25.034		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

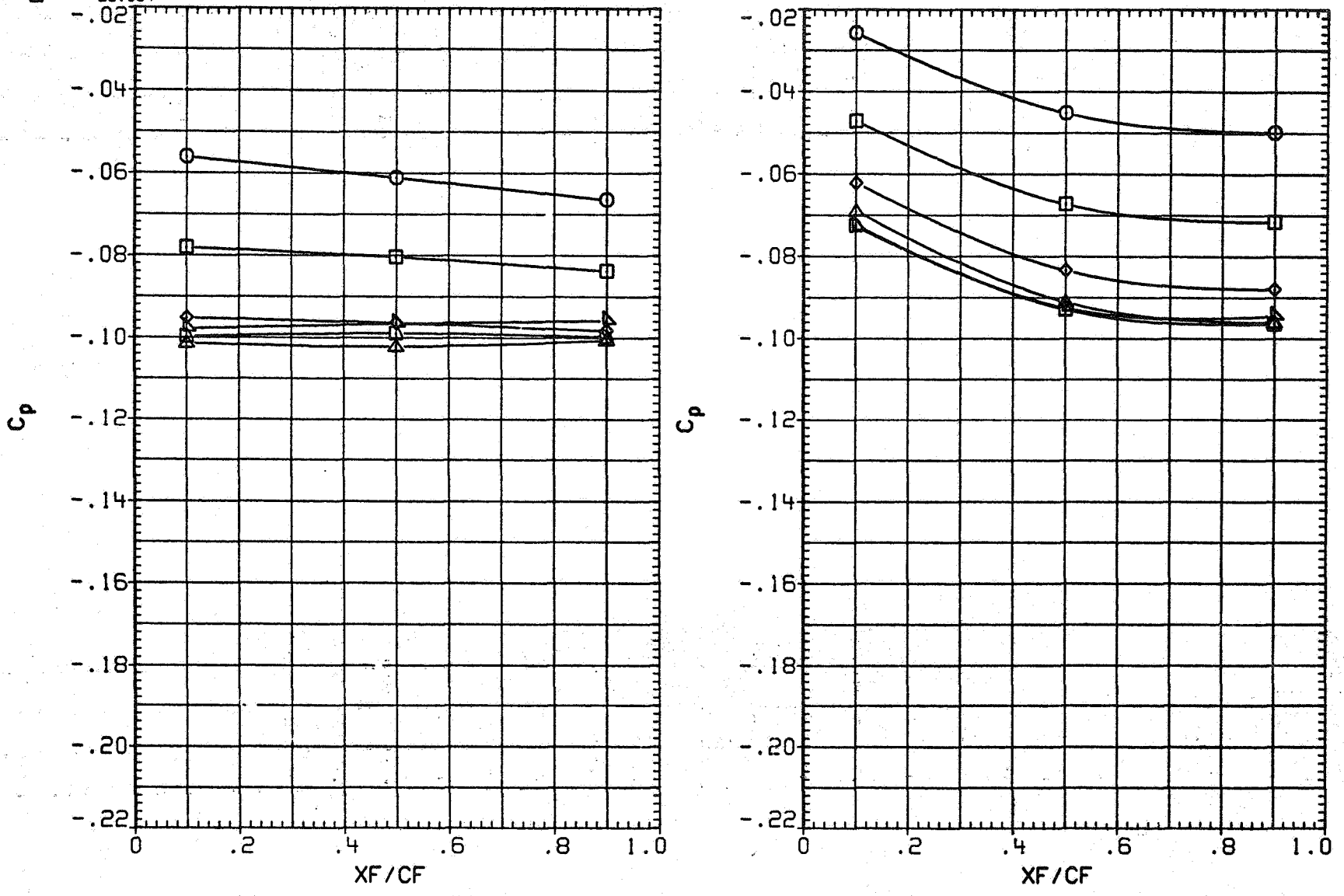


FIG.92 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HJ02) AMES 118-1-11 0A145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.020	.887	3.498
□	4.642	.960	
◇	9.674		
△	14.765		
◁	19.824		
▷	25.034		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

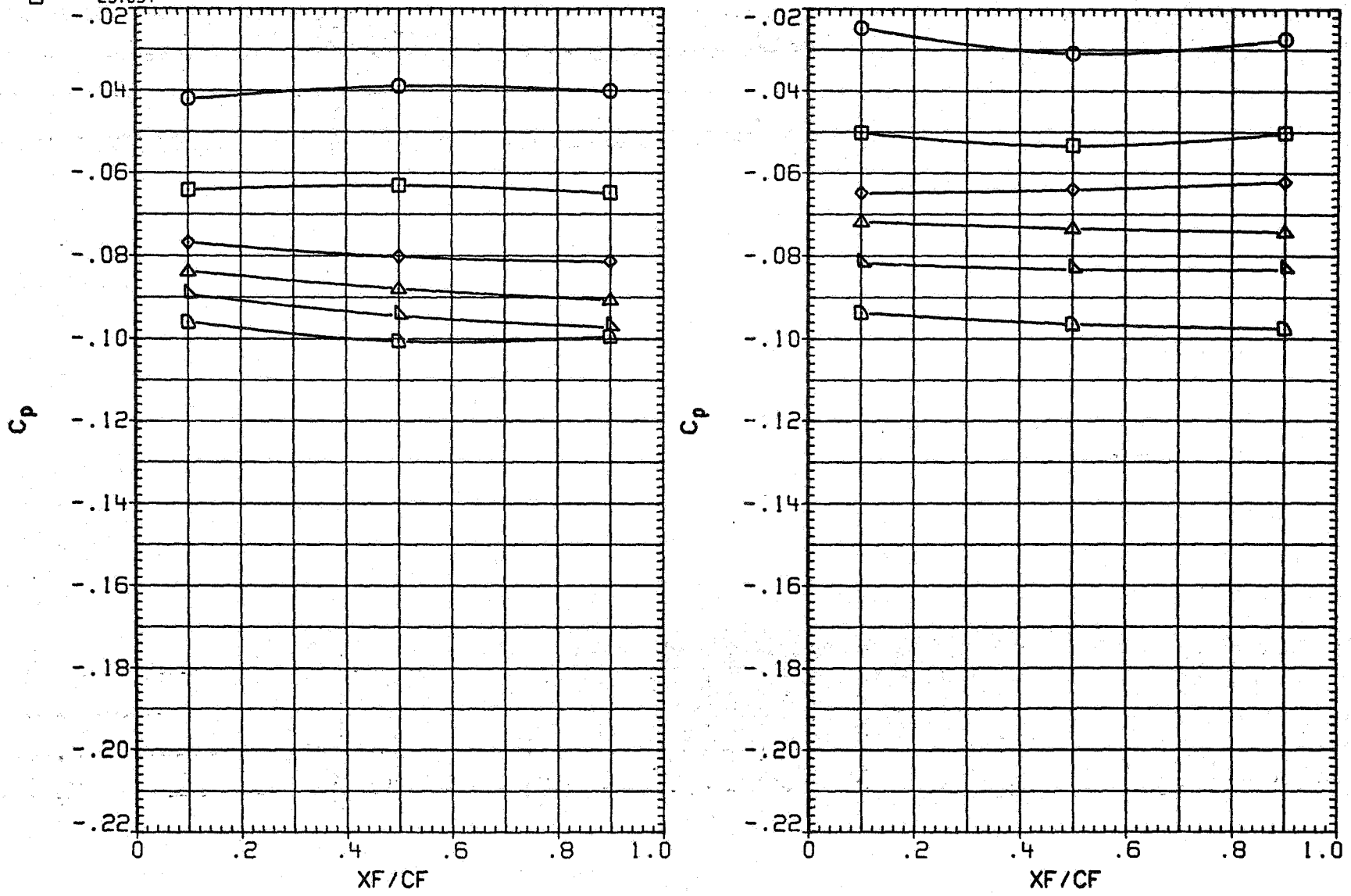


FIG.92 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 0

(R2HJ20) AMES 118-1-11 0A145C 01 FLP DR OB UPPER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.938	.715	2.493
□	-9.941	.800	
◇	-4.920		
◁	.028		
△	5.036		
▷	10.016		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

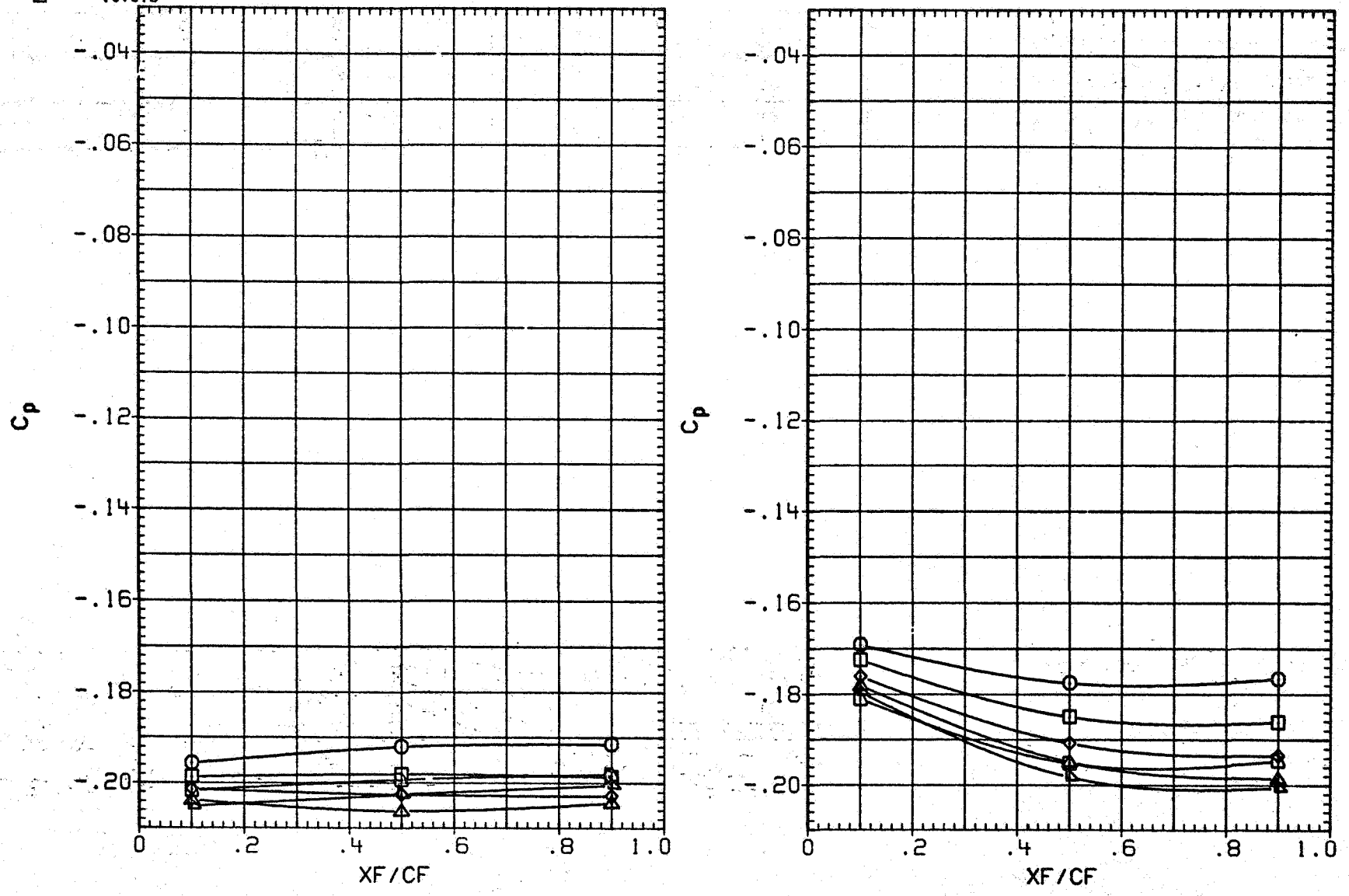


FIG.93 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HJ20) AMES 118-1-11 0A145C 01 FLP DR 0B UPPER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.938	.887	2.493
□	-9.941	.960	
◇	-4.920		
△	.028		
◁	5.036		
▷	10.016		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

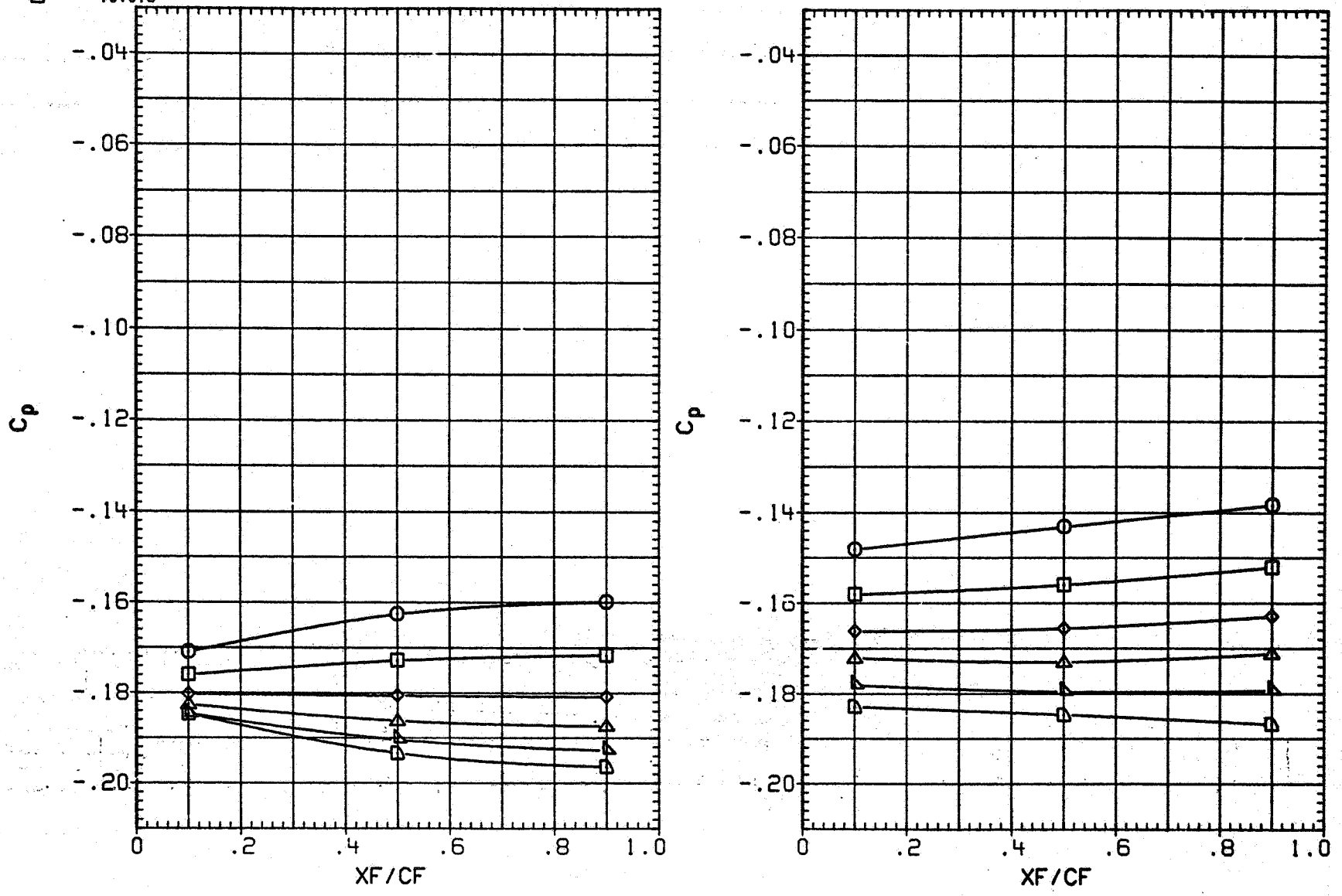


FIG.93 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HJ20) AMES 118-1-11 0A145C 01 FLP DR 0B UPPER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.966	.715	3.000
□	-9.946	.800	
◇	-4.933		
△	.041		
▽	5.002		
D	10.026		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

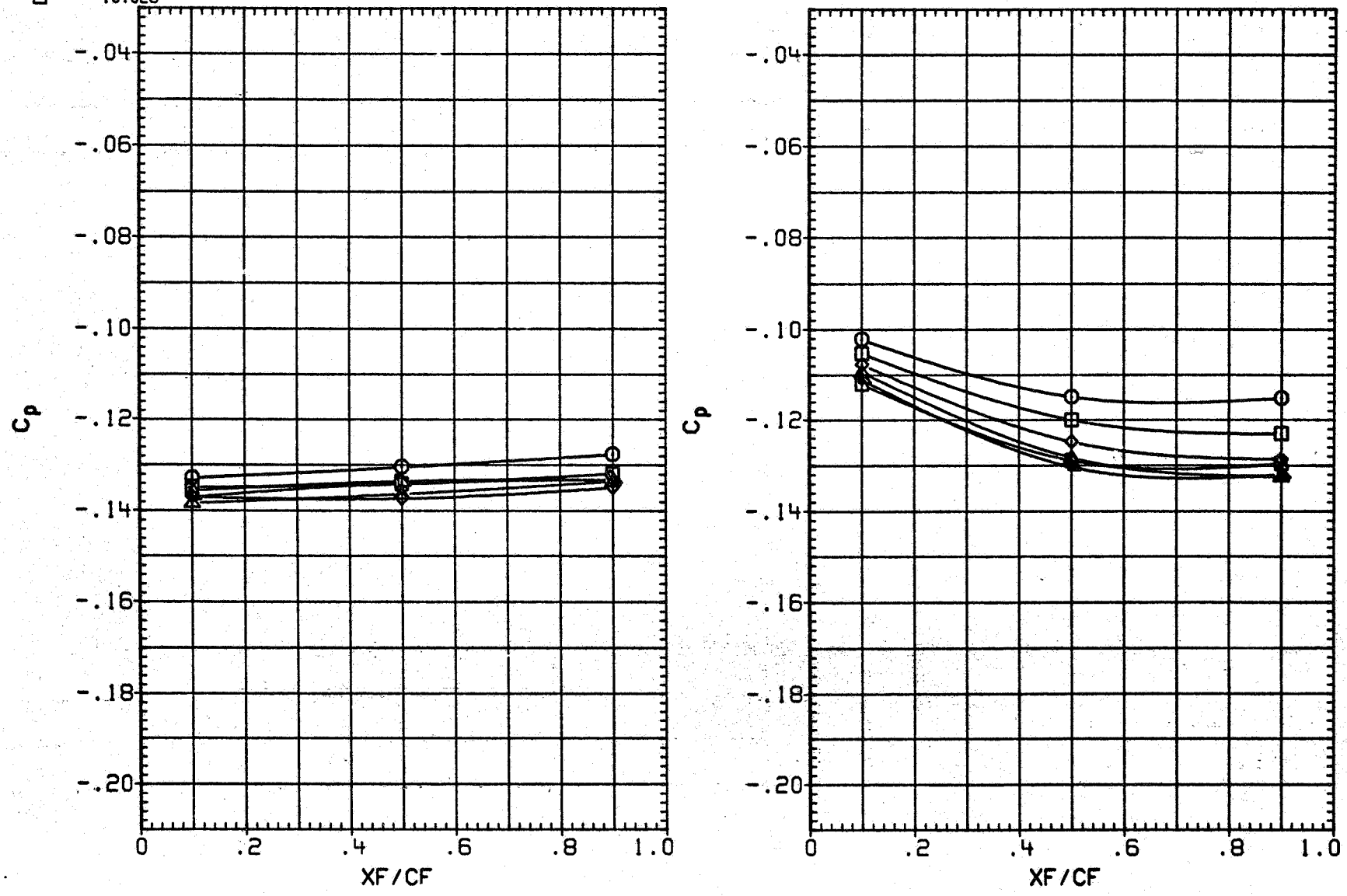


FIG.93 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

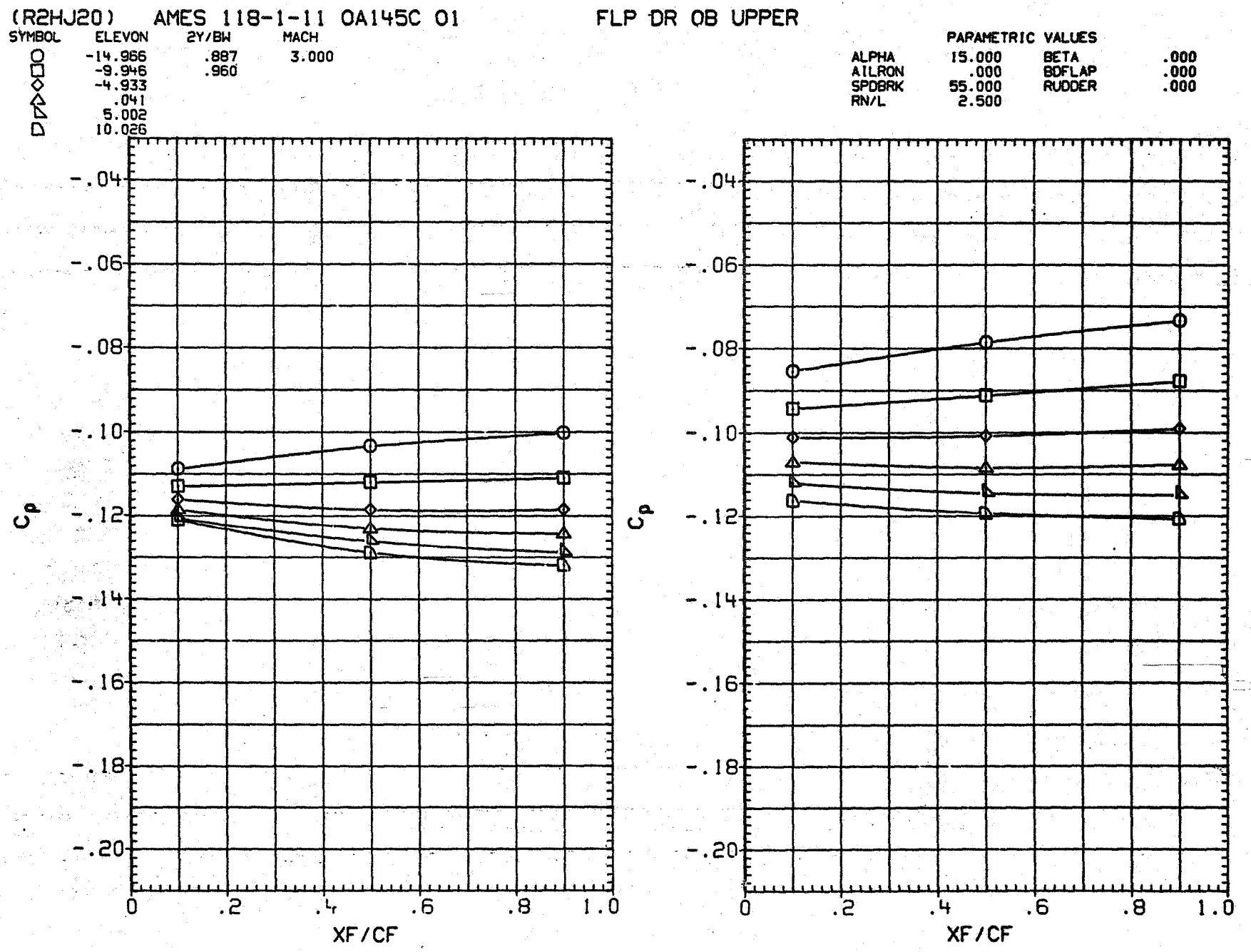


FIG.93 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HJ20) AMES 118-1-11 0A145C 01 FLP DR OB UPPER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.935	.715	3.498
□	-9.941	.800	
◇	-4.943		
△	.029		
◁	5.039		
▷	10.019		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

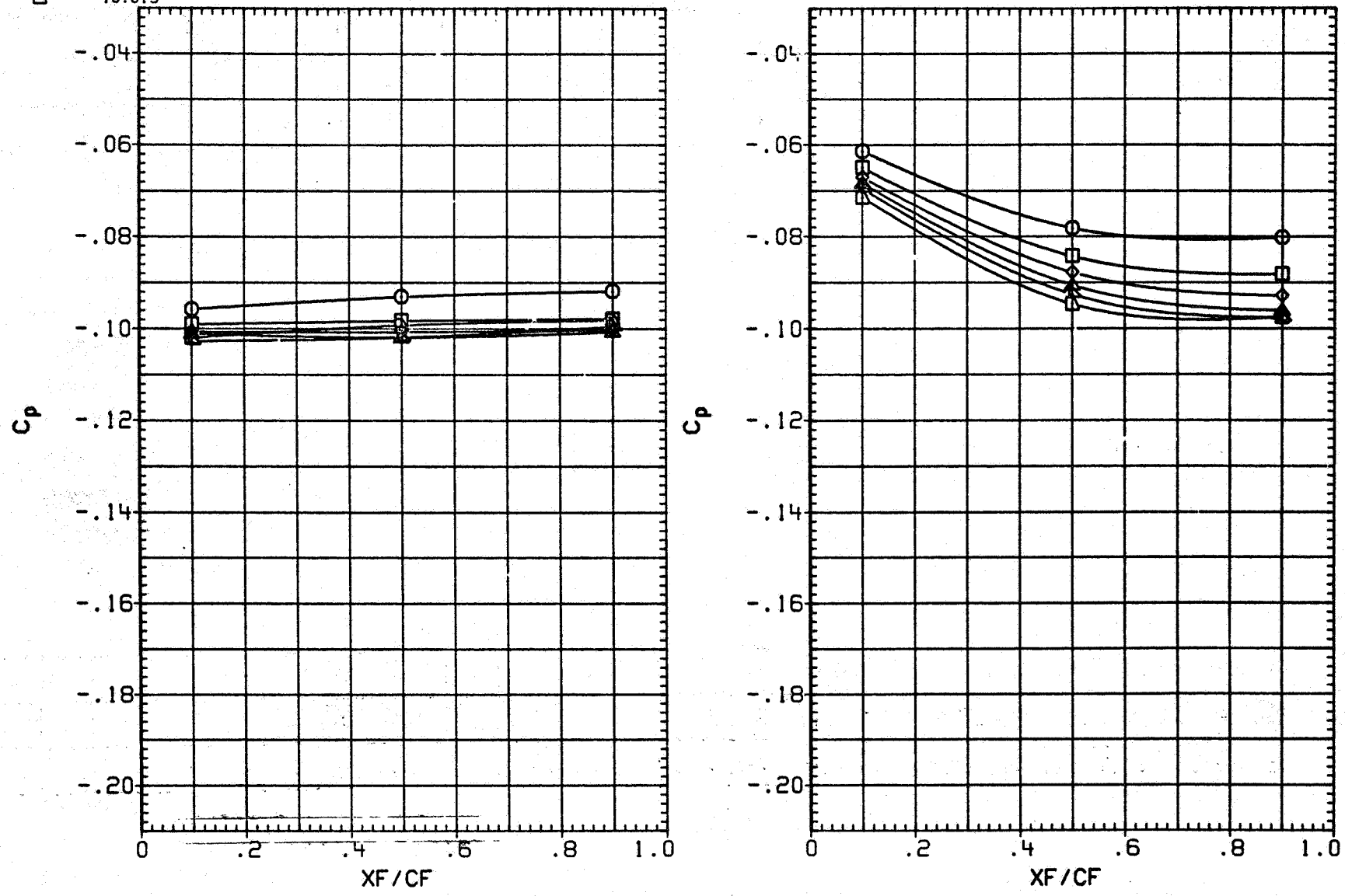


FIG.93 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HJ20) AMES 118-1-11 OA145C 01 FLP DR OB UPPER

SYMBOL	ELEVON	2Y/BW	MACH
○	-14.935	.887	3.498
□	-9.941	.960	
◇	-4.943		
△	.029		
◁	5.039		
▱	10.019		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

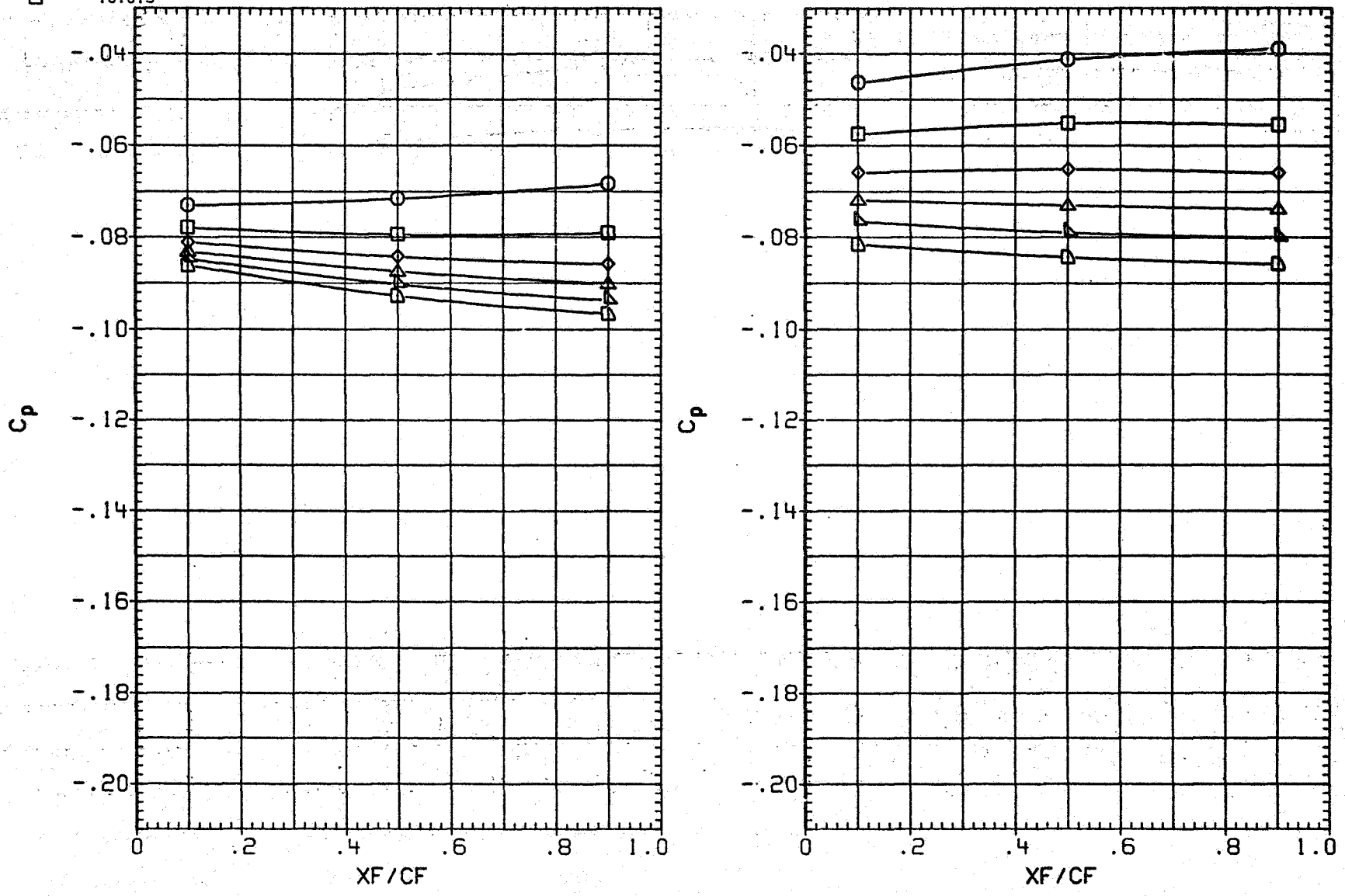


FIG.93 OA145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ELEVON EFFECT AT ALPHA = 15

(R2HJ13) AMES 118-1-11 0A145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.715	3.000
□	4.933	.800	
◇	10.065		
△	15.160		
◁	20.226		
D	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

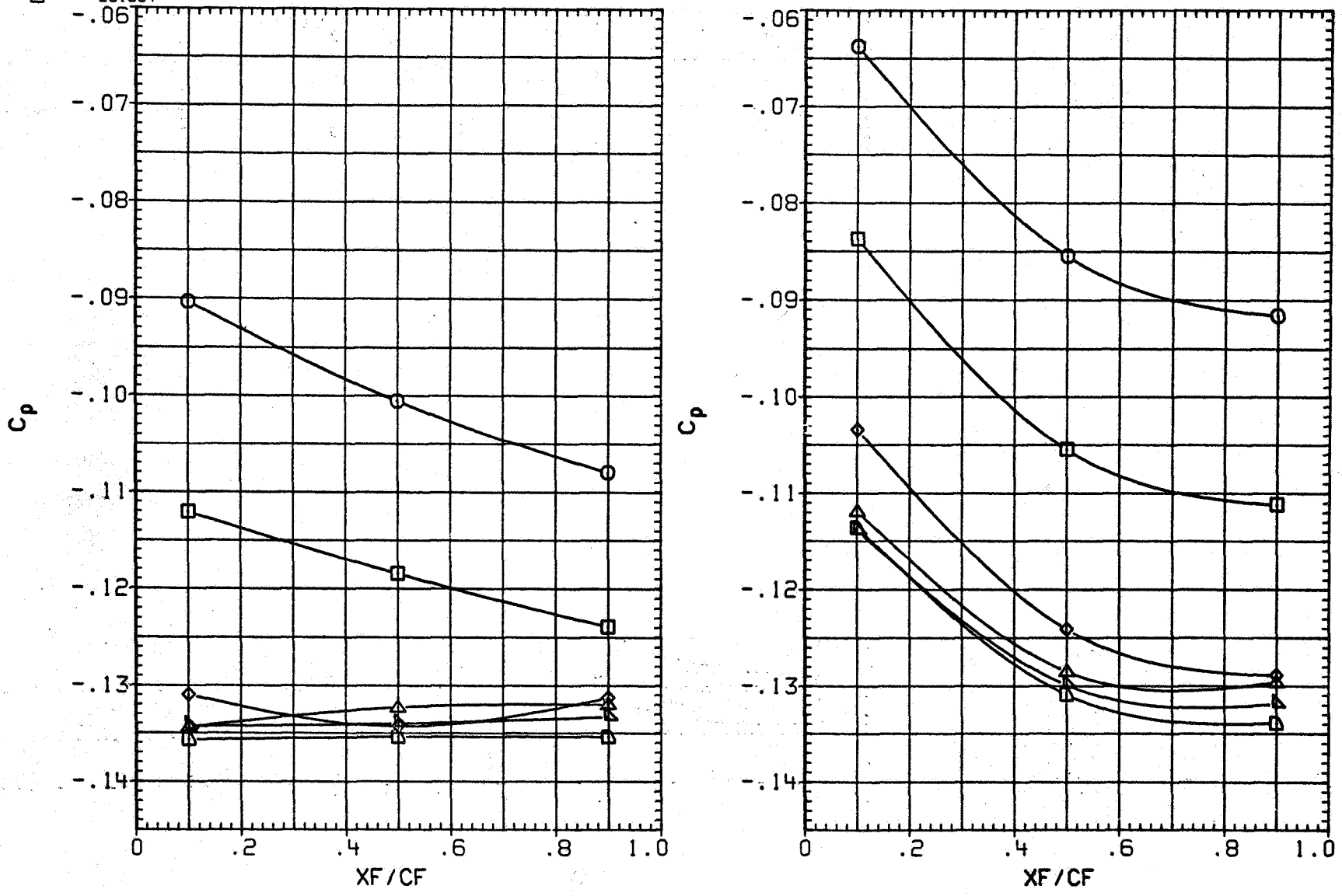


FIG.94 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HJ13) AMES 118-1-11 0A145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.182	.887	3.000
□	4.933	.960	
◇	10.065		
△	15.160		
◁	20.226		
D	25.394		

PARAMETRIC VALUES

BETA	.000	ELEVON	10.000
AILRON	.000	BDFLAP	.000
SPOBRK	55.000	RUDDER	.000
RN/L	2.500		

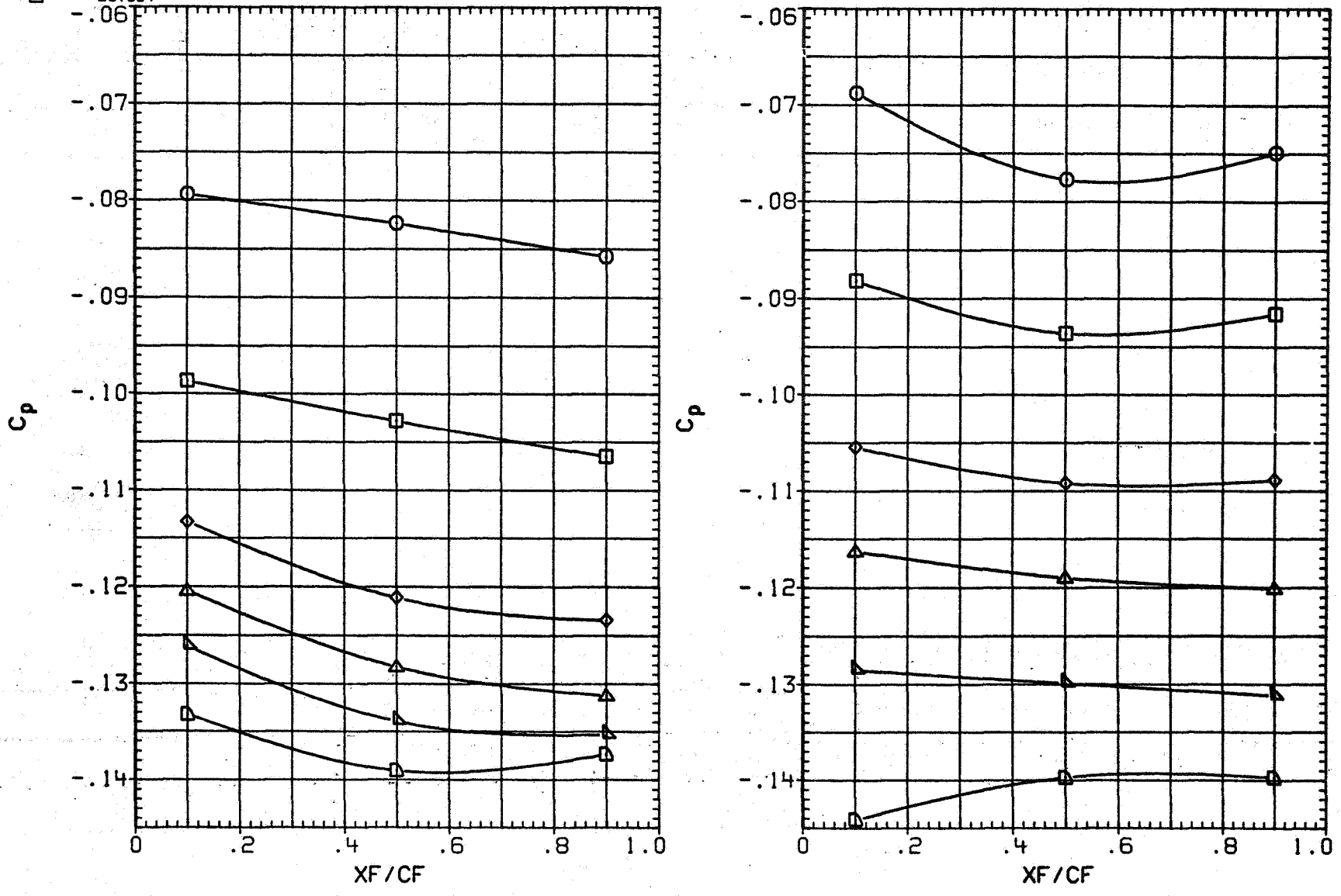


FIG.94 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 10

(R2HJ16) AMES 118-1-11 0A145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.189	.715	3.001
□	5.024	.800	
◇	10.117		
△	15.226		
▽	20.285		
D	25.372		

PARAMETRIC VALUES

BETA	.000	ELEVON	-10.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

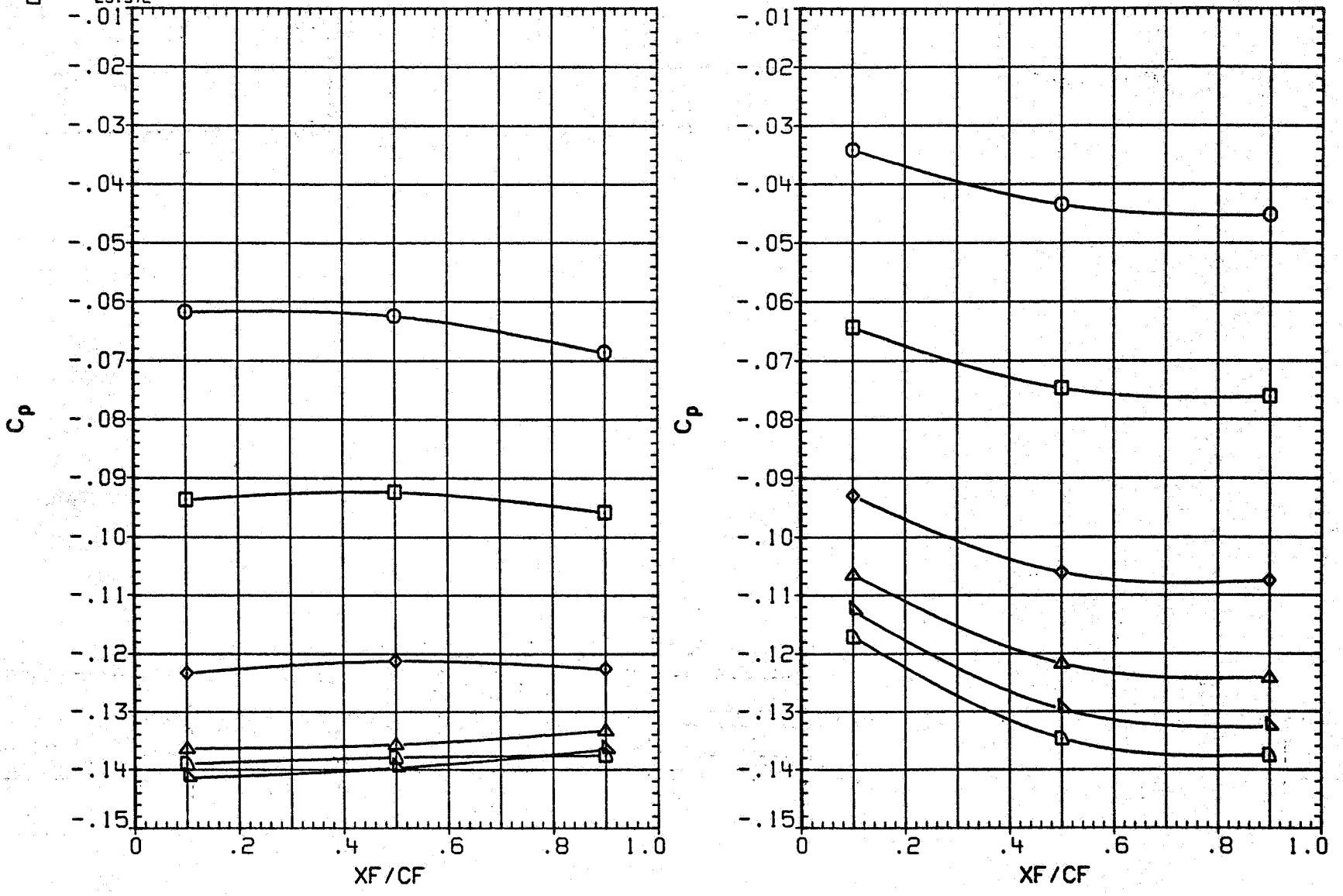


FIG.95 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

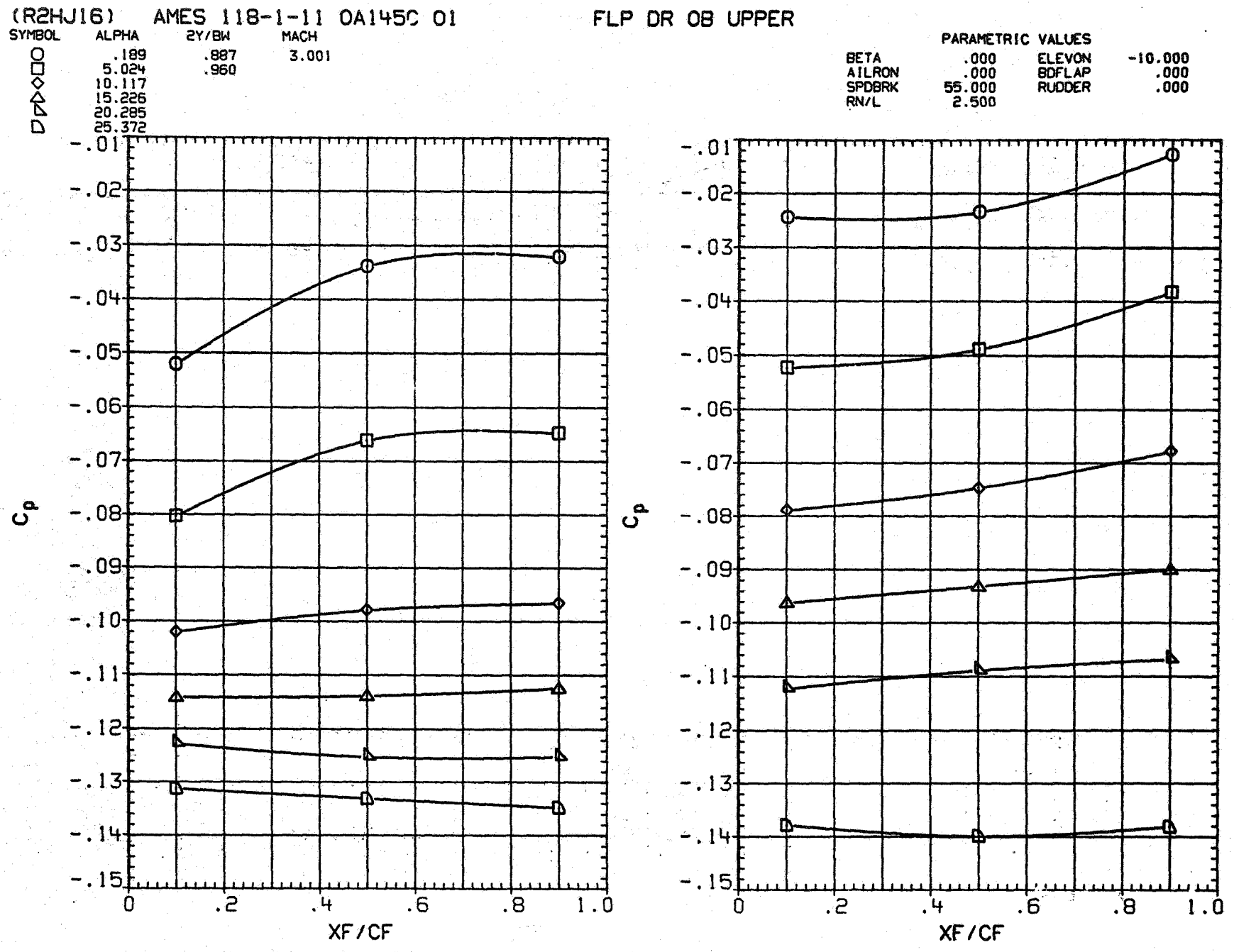


FIG.95 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -10

(R2HJ14) AMES 118-1-11 OA145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.181	.715	3.000
□	4.954	.800	
◇	10.066		
△	15.156		
◁	20.228		
D	25.389		

PARAMETRIC VALUES

BETA	.000	ELEVON	20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

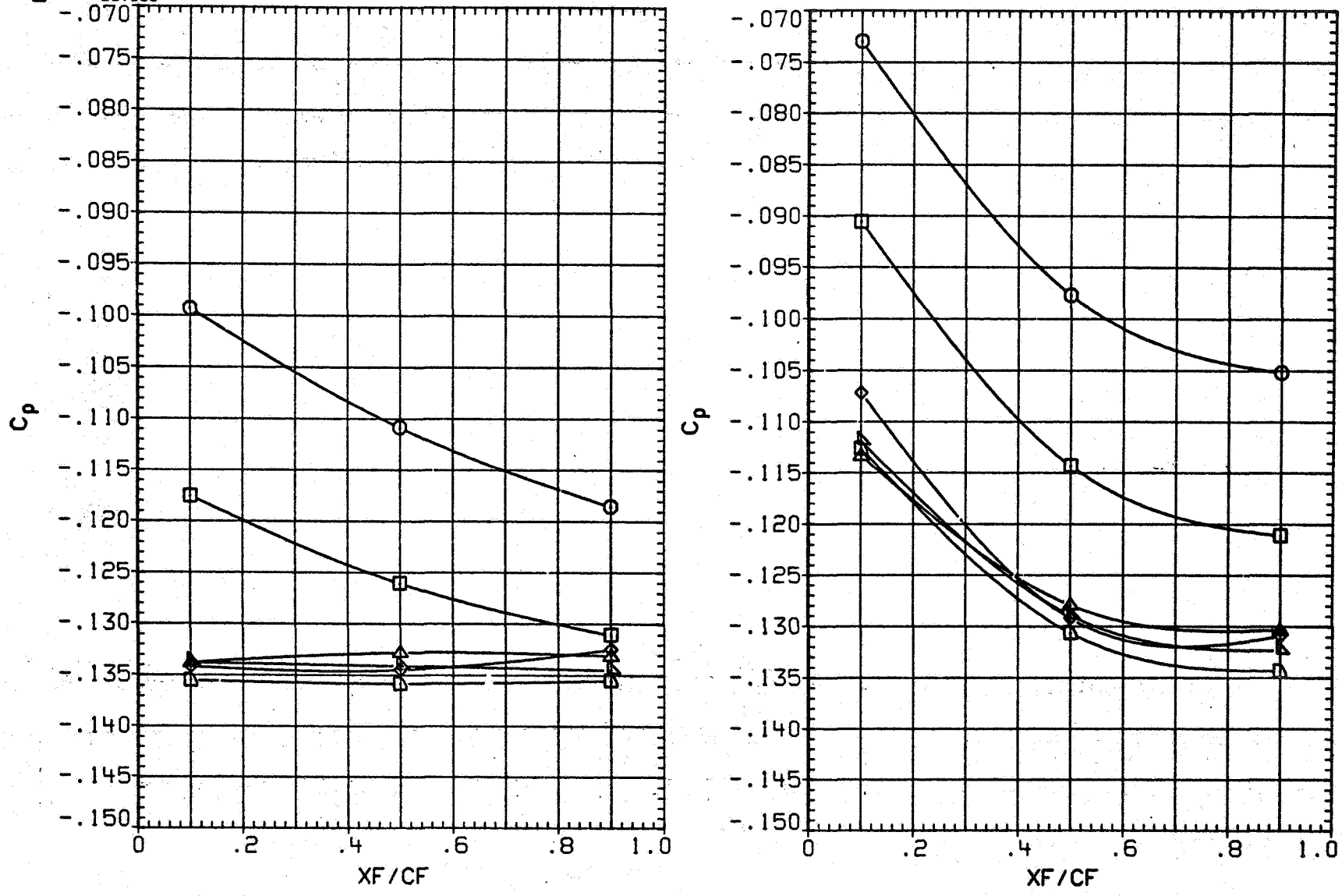


FIG.96 OA145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

(R2HJ14) AMES 118-1-11 OA145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.181	.887	3.000
□	4.954	.960	
◇	10.066		
△	15.156		
◁	20.228		
D	25.389		

PARAMETRIC VALUES

BETA	.000	ELEVON	20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

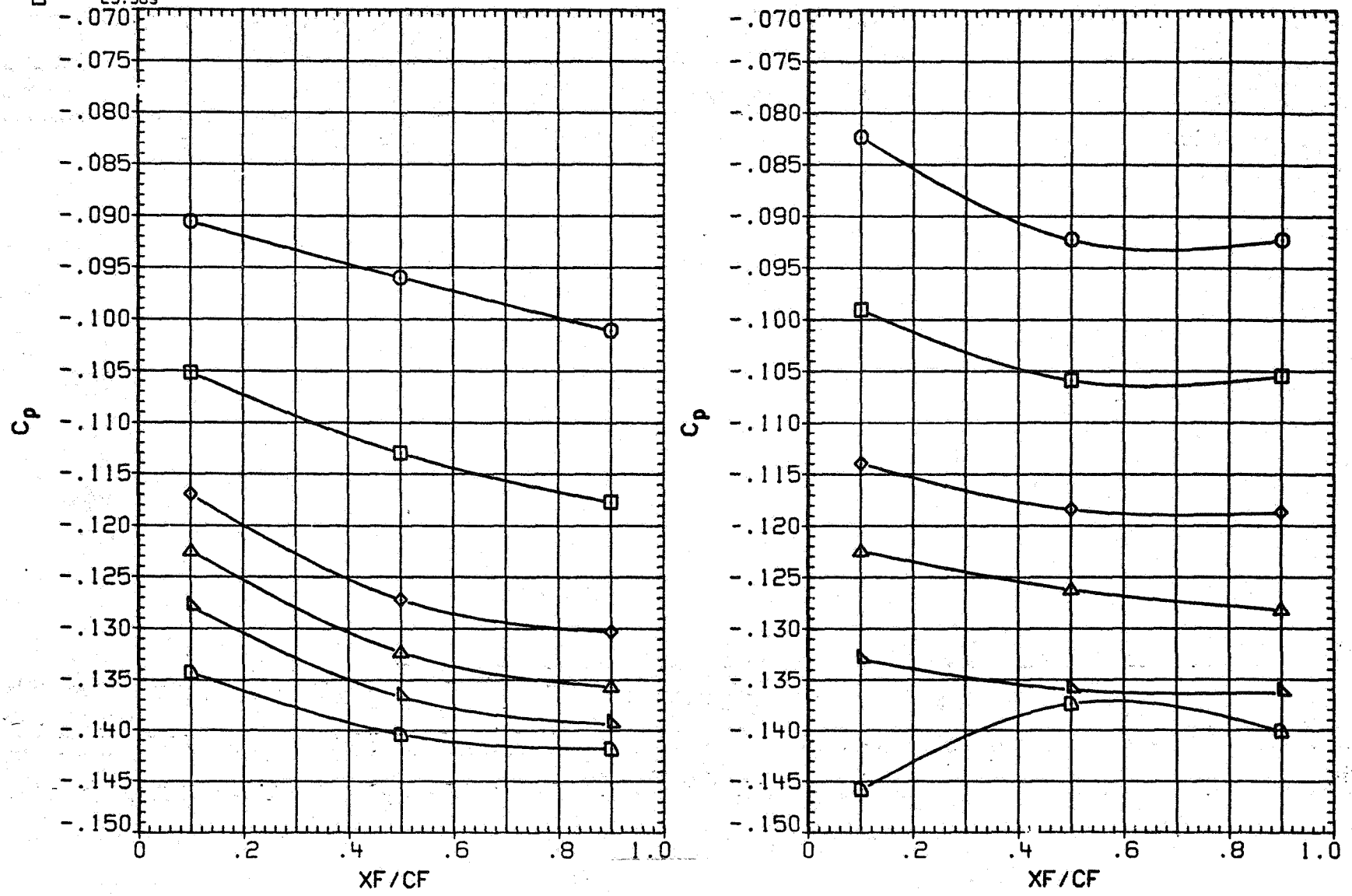


FIG.96 OA145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = 20

(R2HJ17) AMES 118-1-11 0A145C 01

FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.180	.715	3.001
□	5.058	.800	
◇	10.092		
△	15.201		
▷	20.272		
▽	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

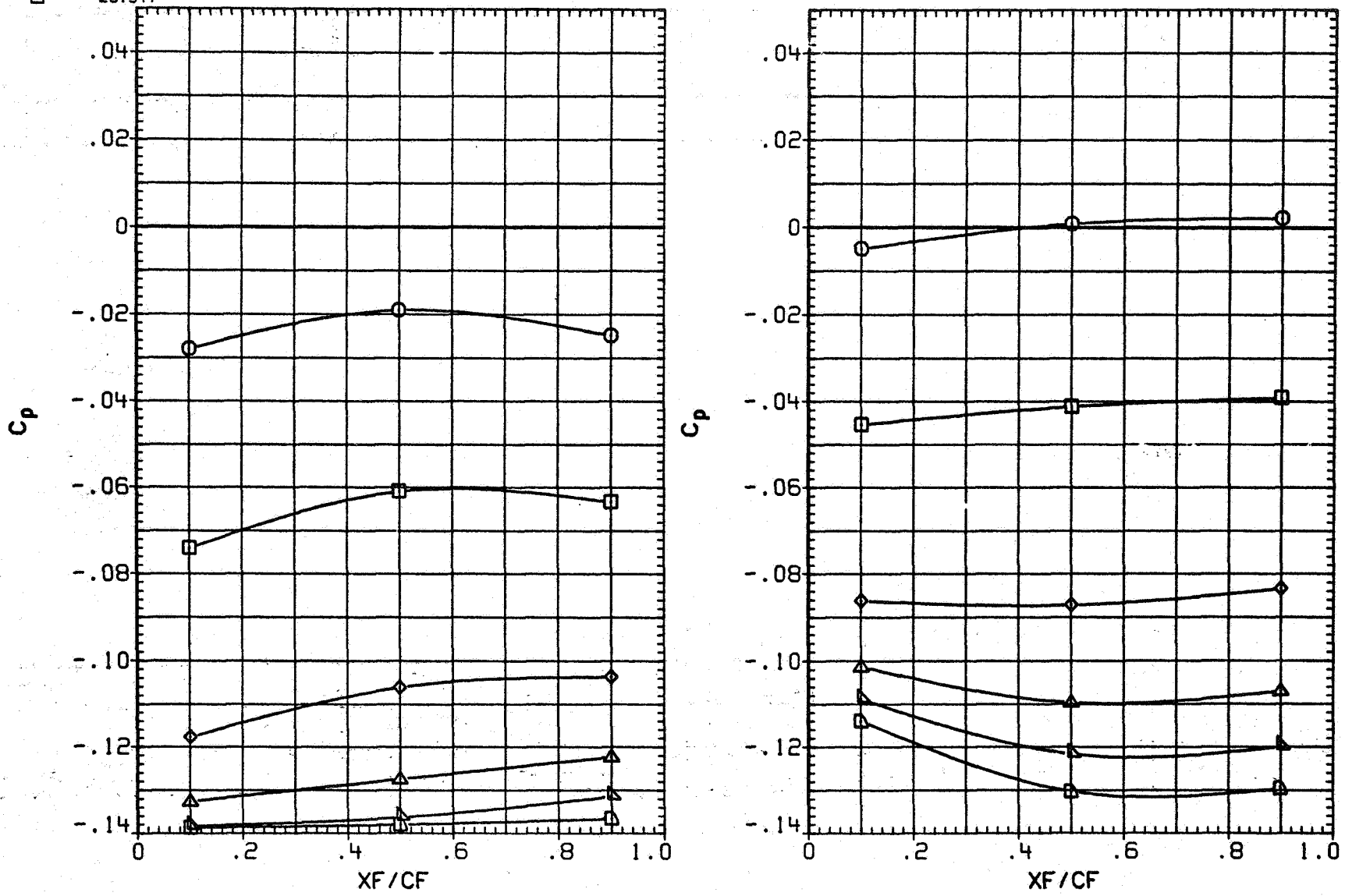


FIG.97 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

(R2HJ17) AMES 118-1-11 0A145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.180	.887	3.001
□	5.058	.960	
◇	10.092		
△	15.201		
◁	20.272		
▷	25.347		

PARAMETRIC VALUES

BETA	.000	ELEVON	-20.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

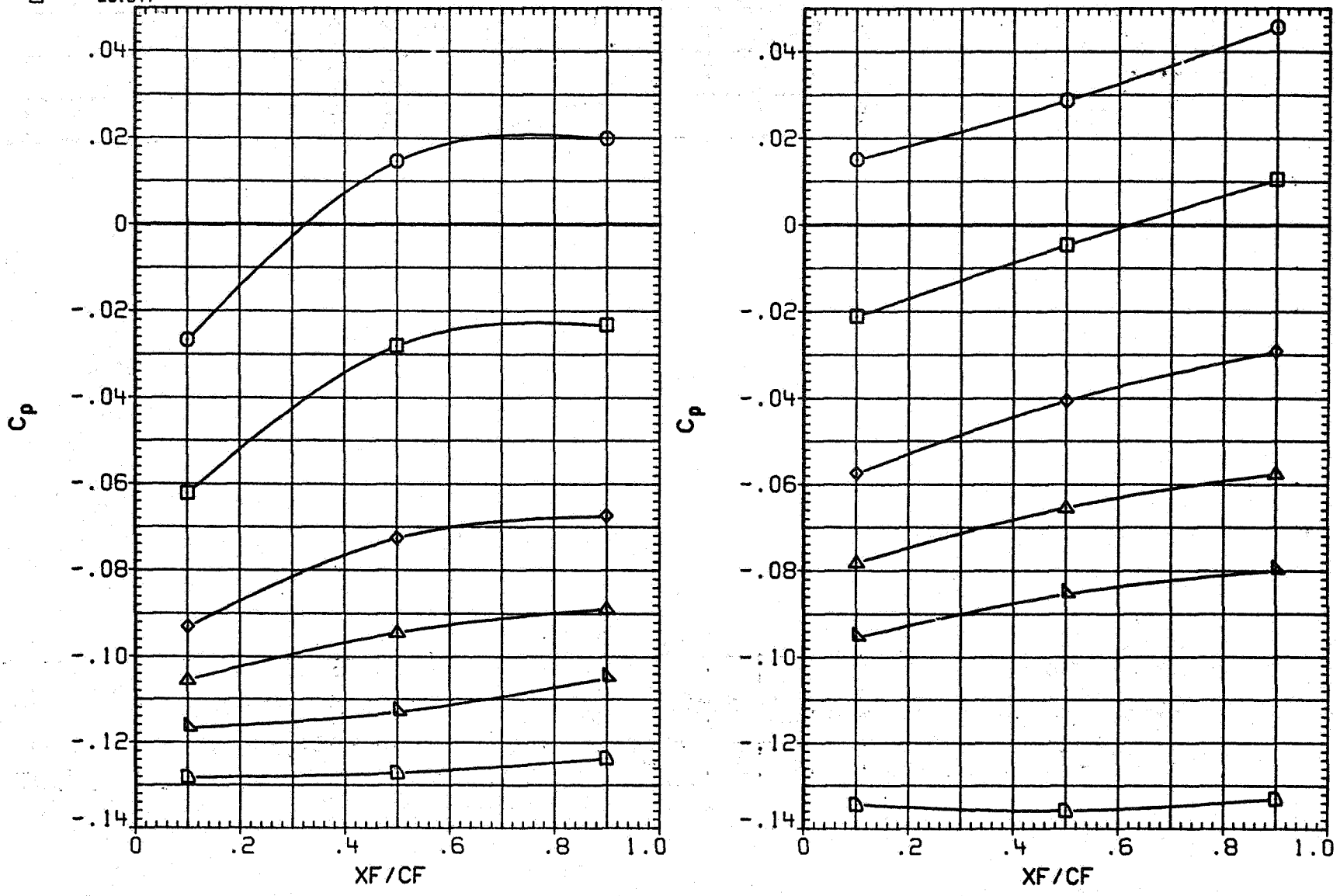


FIG.97 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -20

(R2HJ18) AMES 118-1-11 OA145C 01 FLP DR OB UPPER

SYMBOL	ALPHA	2Y/BW	MACH
○	.183	.715	3.001
□	5.026	.800	
◇	10.092		
◁	15.197		
△	20.276		
▷	25.519		

PARAMETRIC VALUES

BETA	.000	ELEVON	-35.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

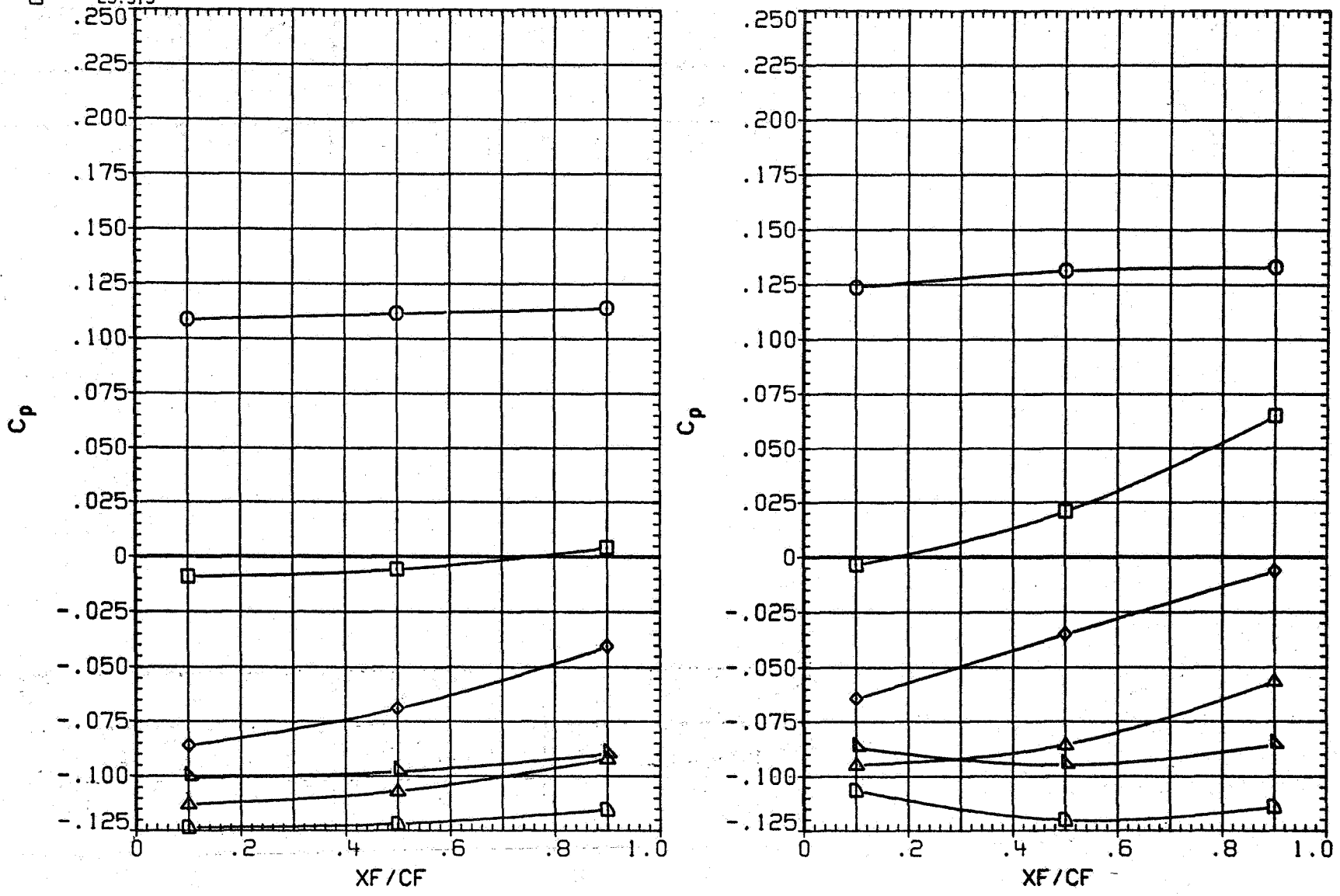


FIG.98 OA145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

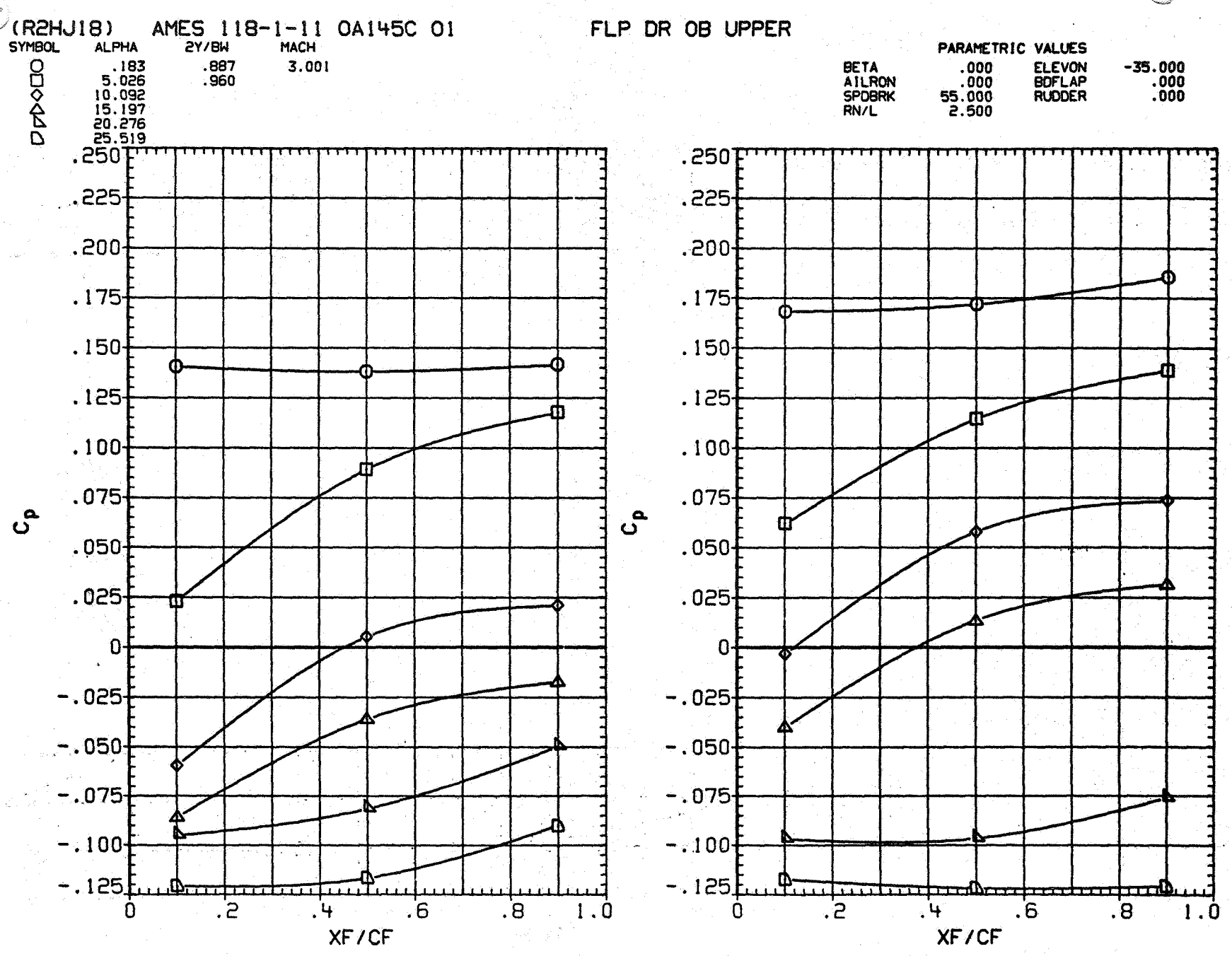


FIG.98 0A145C FLIPPER DOOR CP VS. XF/CF
OUTBOARD UPPER SURFACE, ALPHA EFFECT AT ELEVON = -35

(R2HS02) AMES 118-1-11 OA145C 01 BODYFLAP UPPER

SYMBOL	ALPHA	YBF/BB	MACH
○	.182	.100	3.001
□	5.887	.500	
◇	9.949		
△	15.195		
◁	20.260		
D	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

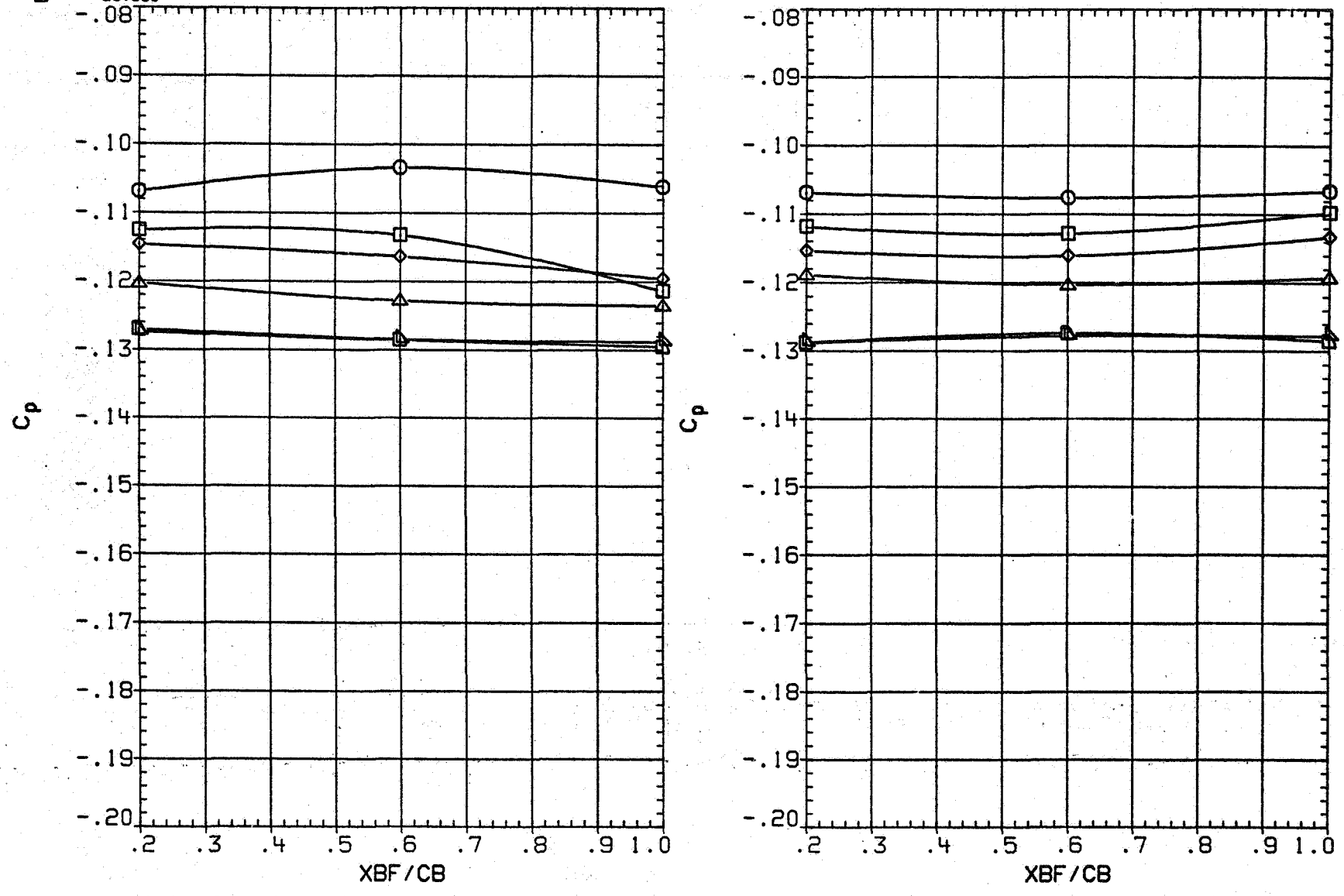


FIG. 99 OA145C BODY FLAP CP VS. XBF/CB
UPPER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

(R2HS56) AMES 118-1-11 OA145C 01 BODYFLAP UPPER

SYMBOL	ALPHA	YBF/BB	MACH
○	.271	.100	3.001
□	4.995	.500	
◇	10.064		
△	15.148		
◁	20.268		
▷	25.441		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	-11.700
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

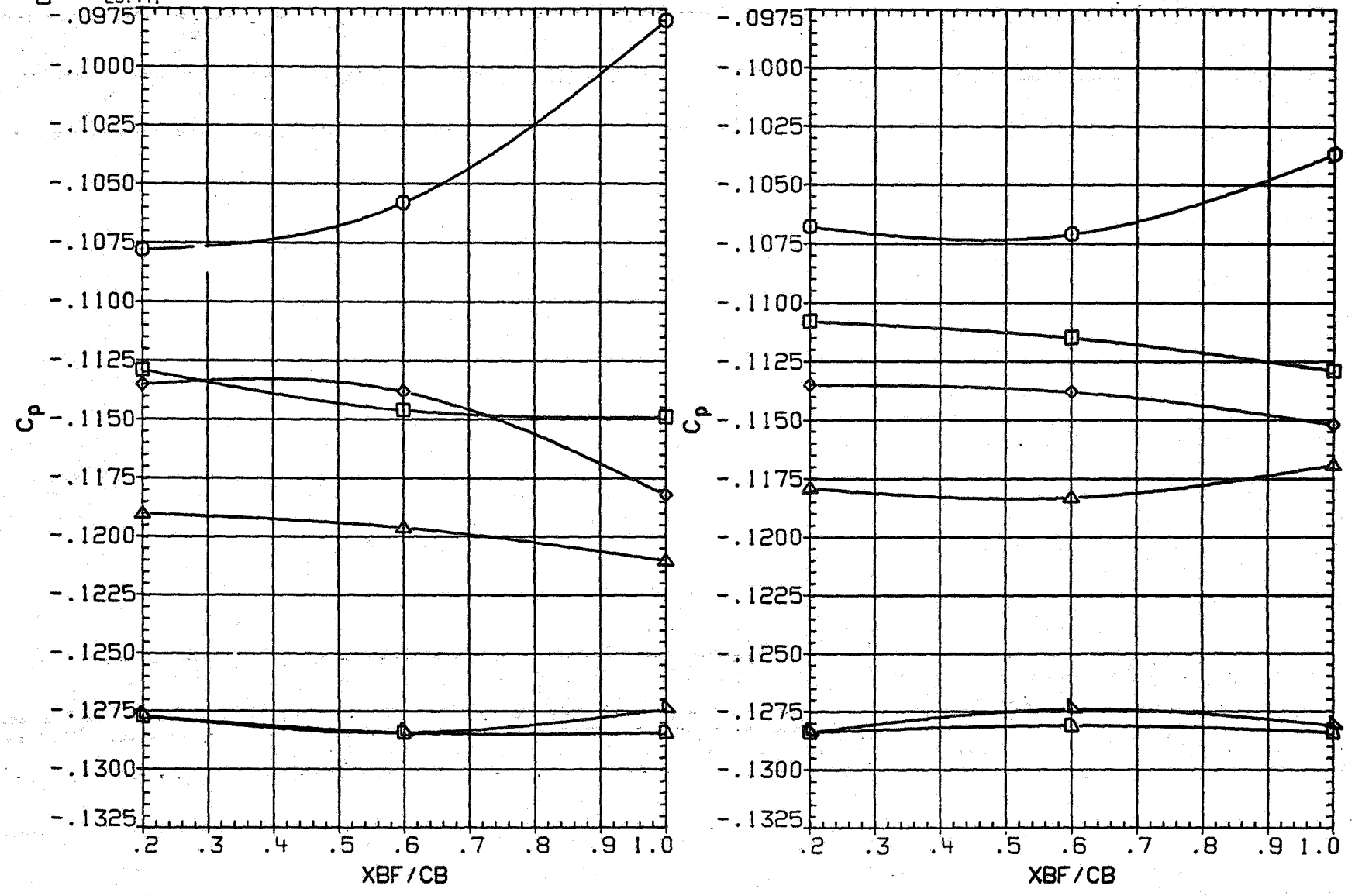


FIG. 100 OA145C BODY FLAP CP VS. XBF/CB
UPPER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

SYMBOL	ALPHA	YBF/BB	MACH
○	.282	.100	3.001
□	4.987	.500	
◇	10.053		
△	15.174		
◁	20.223		
▷	25.430		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	16.300
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

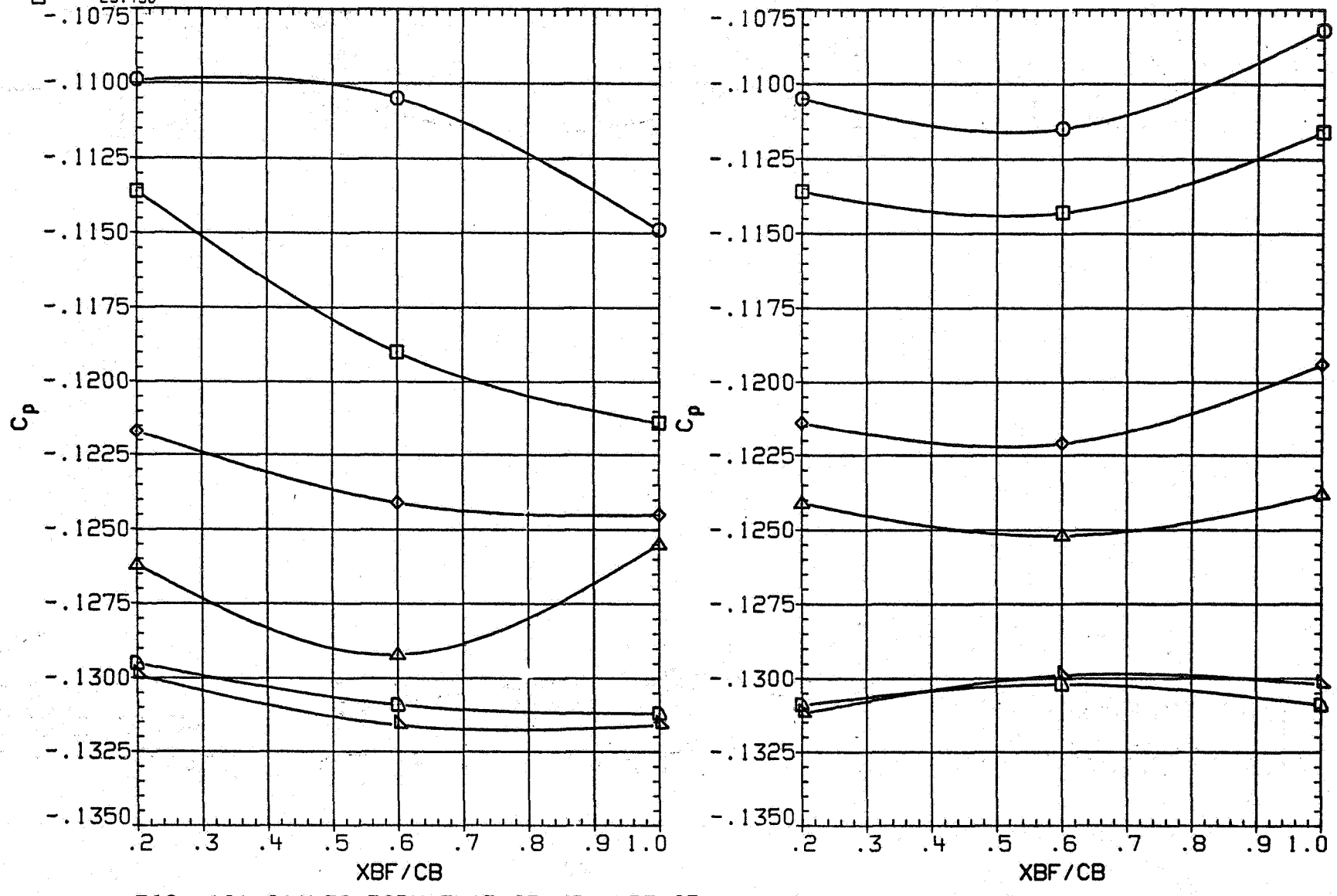


FIG. 101 OA145C BODY FLAP CP VS. XBF/CB
UPPER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

(R2HS58) AMES 118-1-11 OA145C 01 BODYFLAP UPPER

SYMBOL	ALPHA	YBF/BB	MACH
○	.273	.100	3.001
□	4.974	.500	
◇	10.110		
△	15.157		
⌂	20.274		
▷	25.435		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	22.500
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

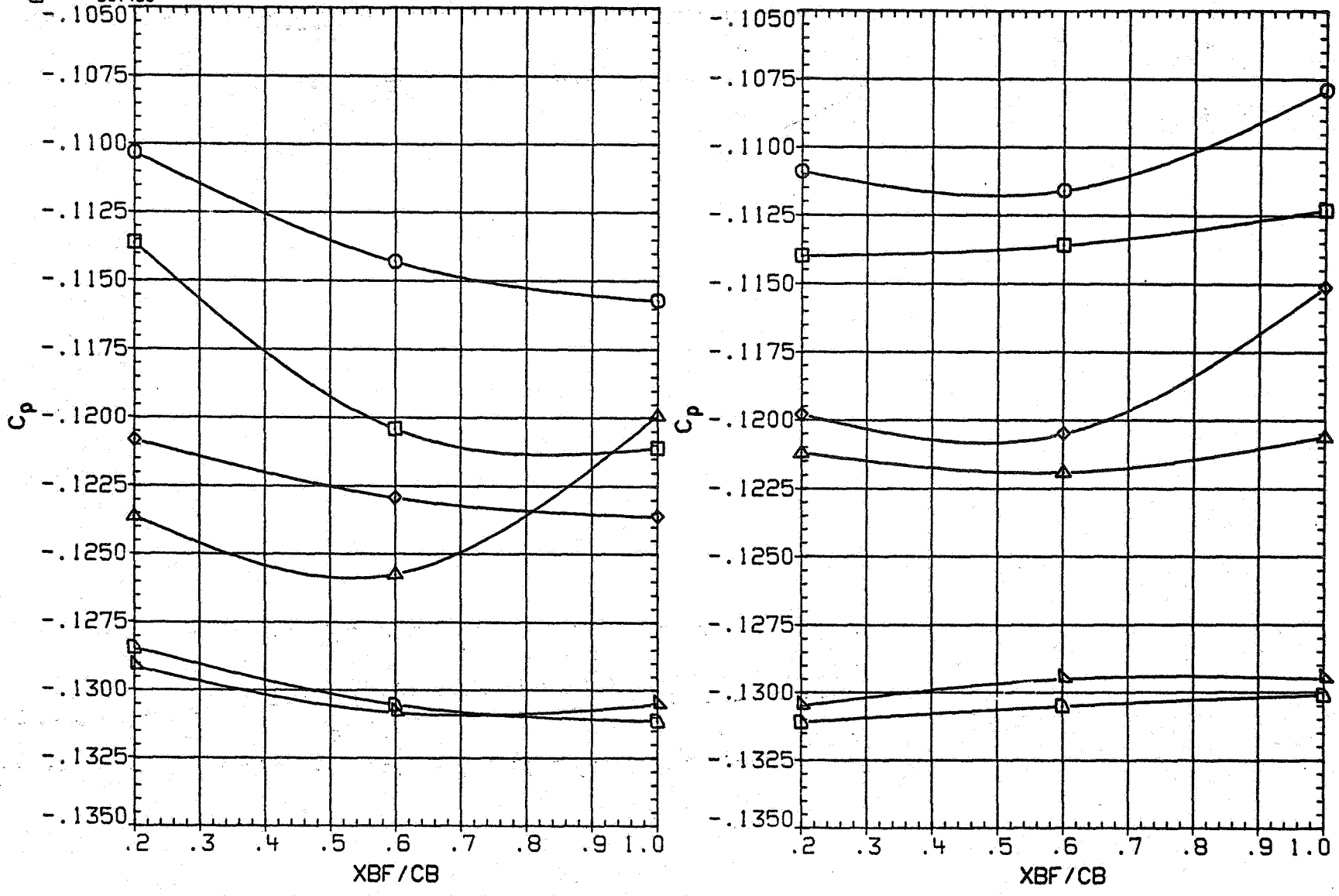


FIG. 102 OA145C BODY FLAP CP VS. XBF/CB
UPPER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HS59) AMES 118-1-11 OA145C 01

BODYFLAP UPPER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.100	3.001
□	.029	.500	
◇	8.010		
◁	16.339		
△	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

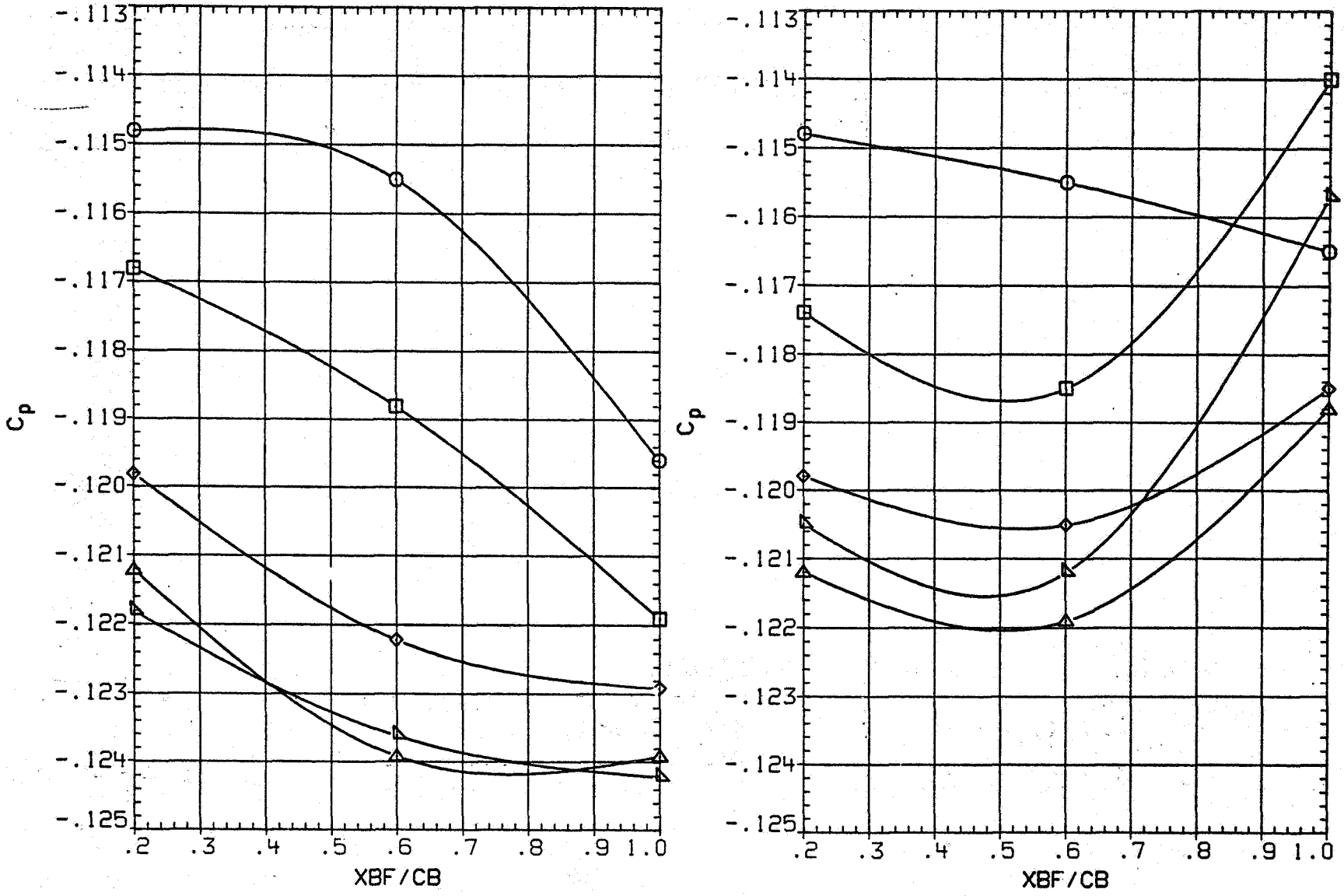


FIG. 103 OA145C BODY FLAP CP VS. XBF/CB
UPPER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

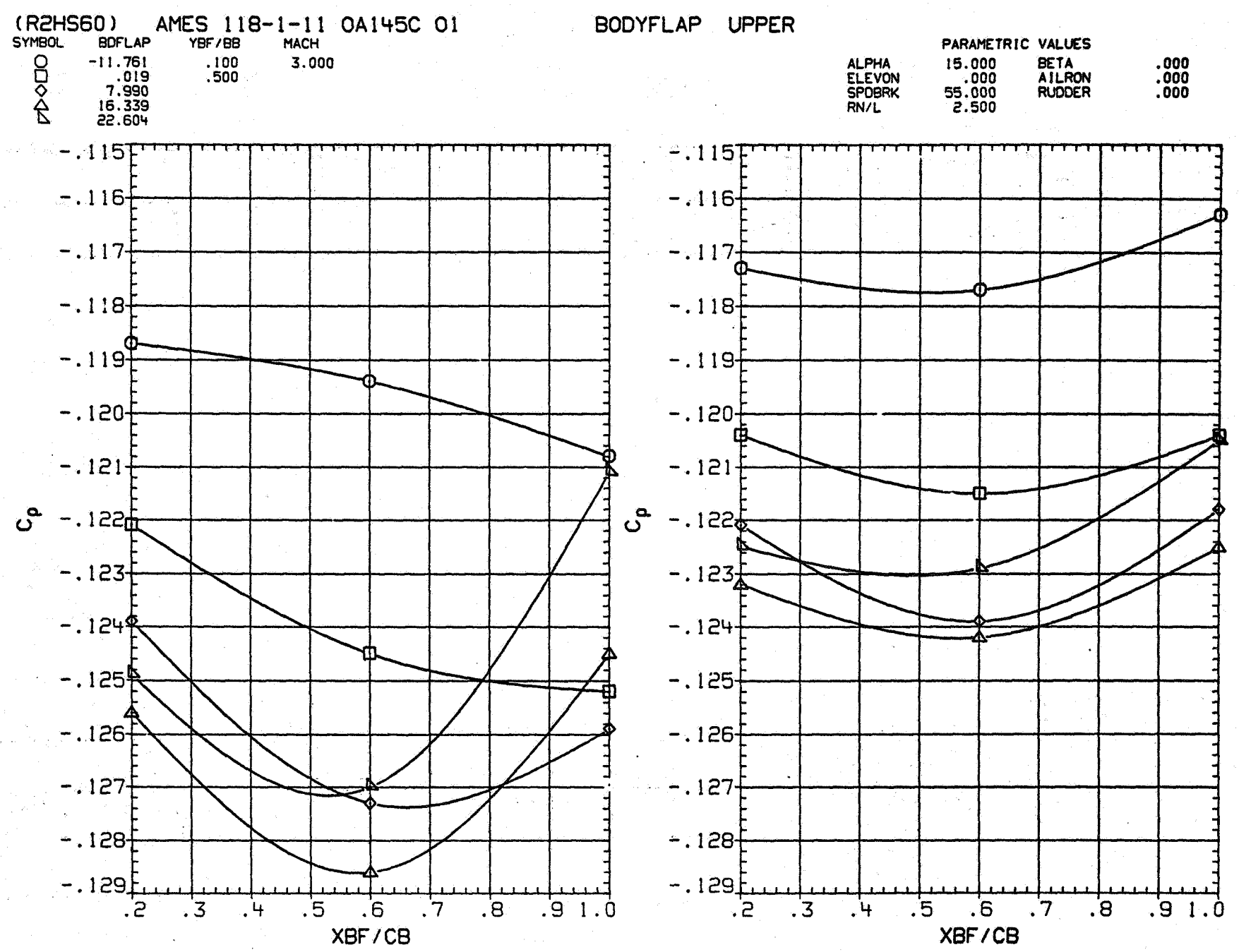


FIG. 104 0A145C BODY FLAP CP VS. XBF/CB
UPPER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

(R2HS61) AMES 118-1-11 OA145C 01 BODYFLAP UPPER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.100	3.001
□	.019	.500	
◇	8.020		
△	16.328		
◁	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

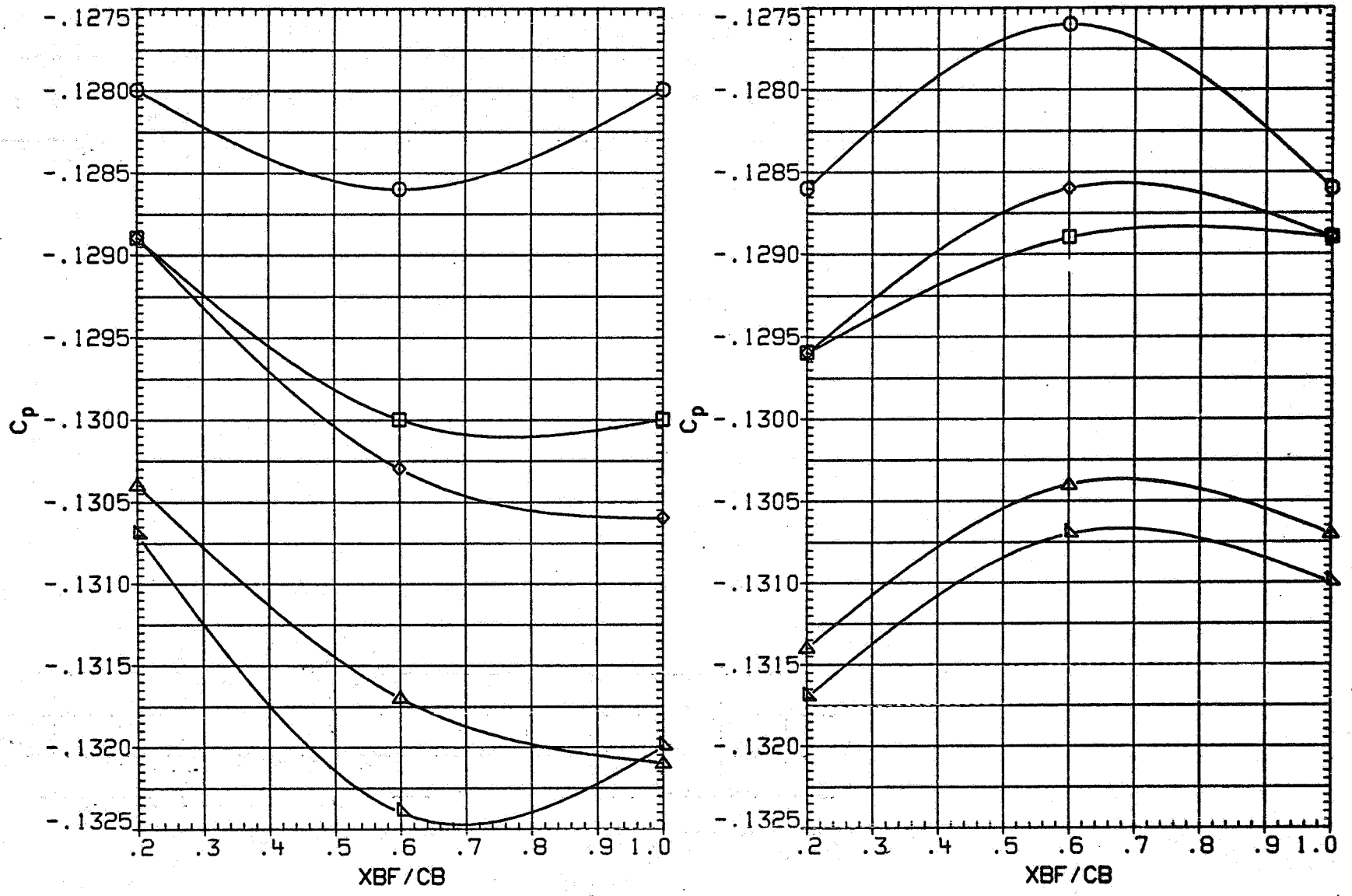


FIG. 105 OA145C BODY FLAP CP VS. XBF/CB
UPPER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

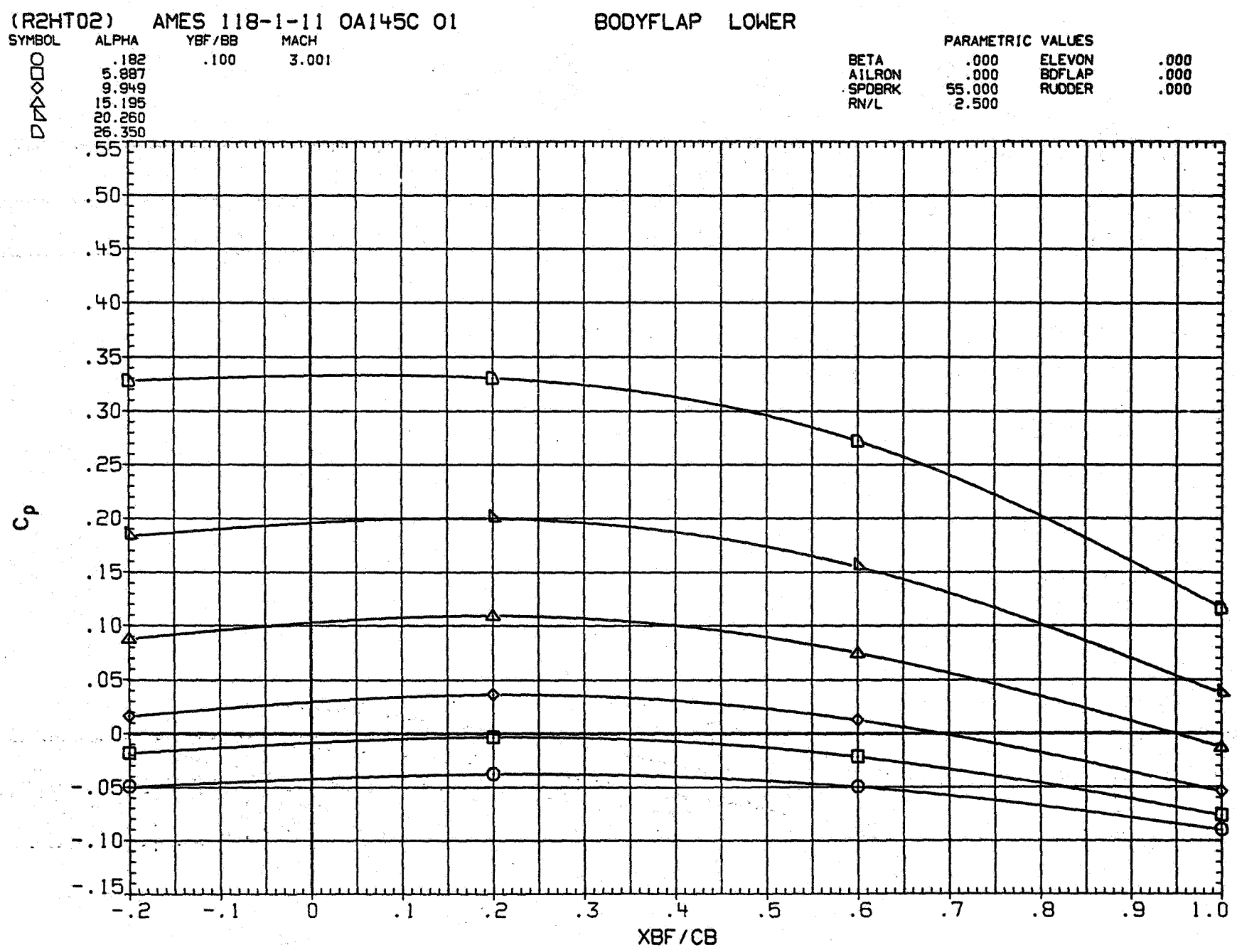


FIG. 106 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

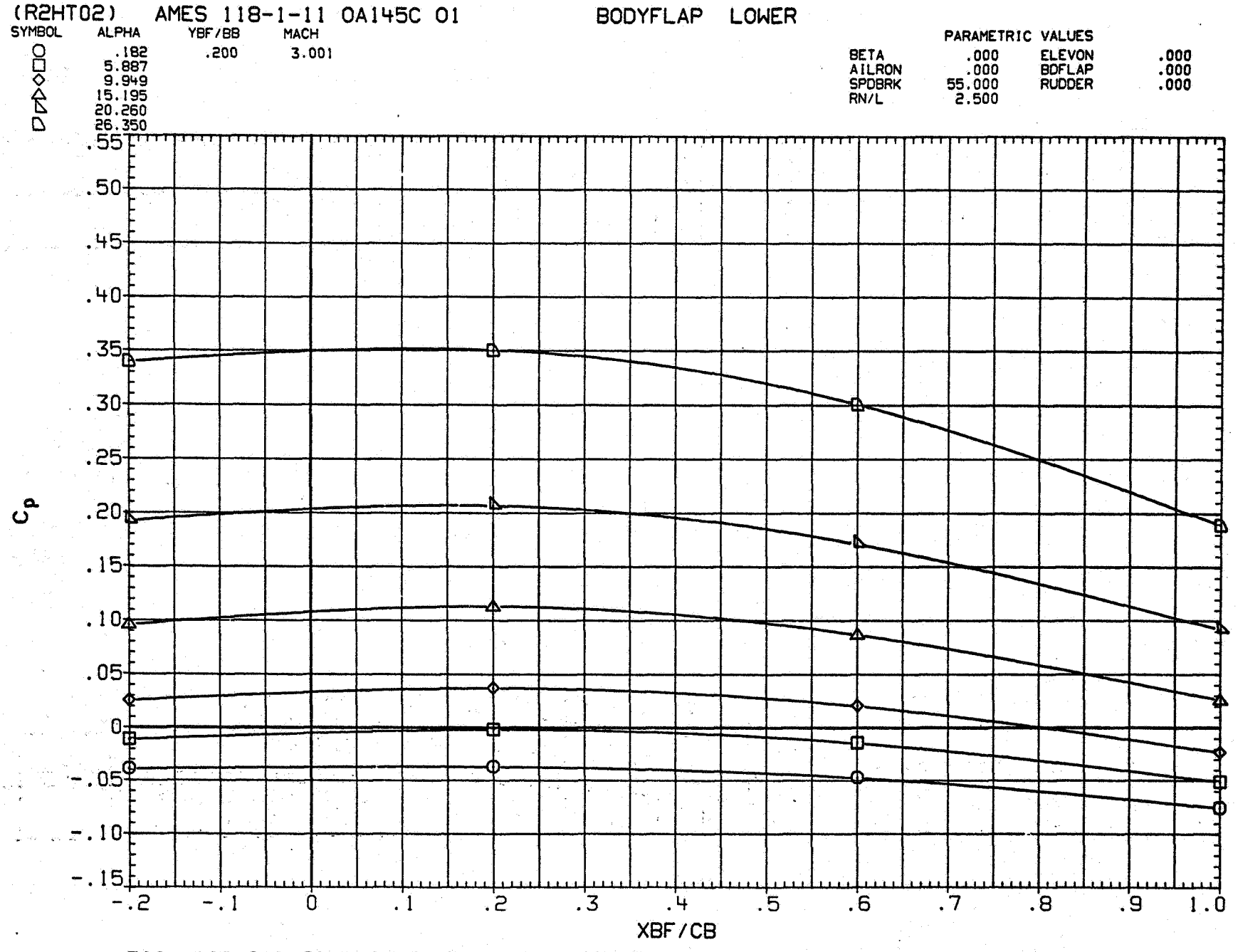


FIG. 106 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

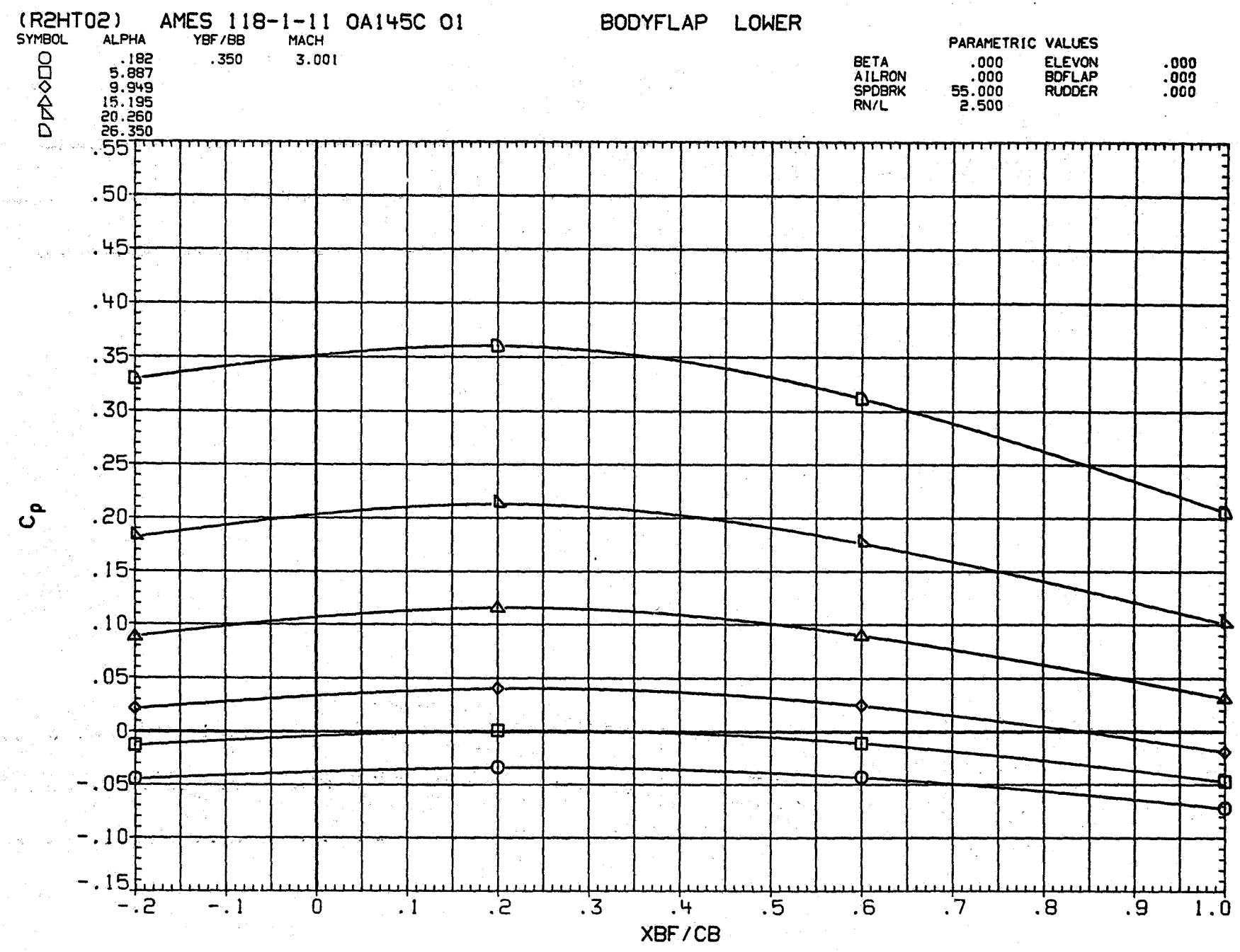


FIG. 106 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

(R2HT02) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.182	.500	3.001
□	5.887		
◇	9.949		
◁	15.195		
△	20.260		
D	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

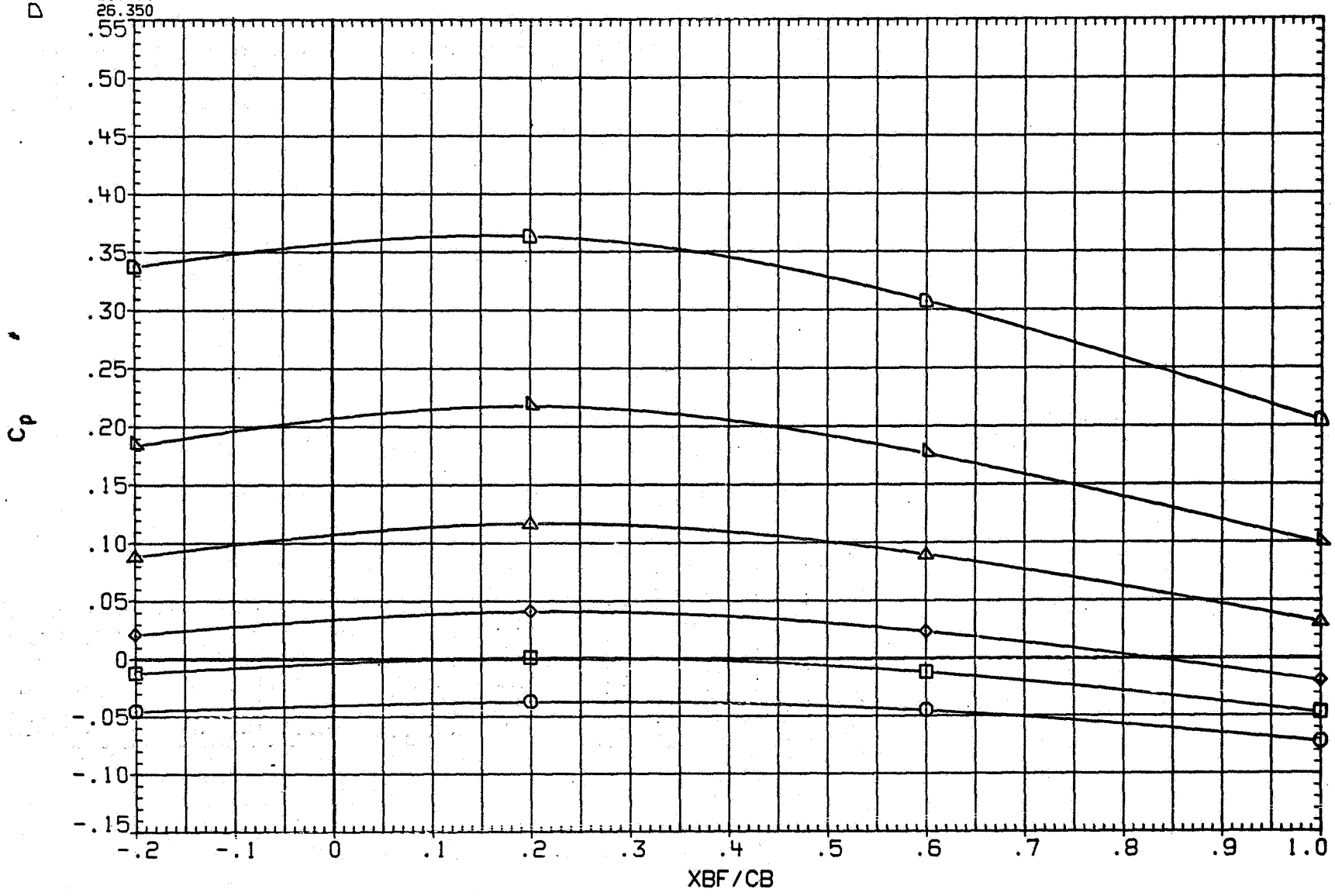


FIG. 106 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

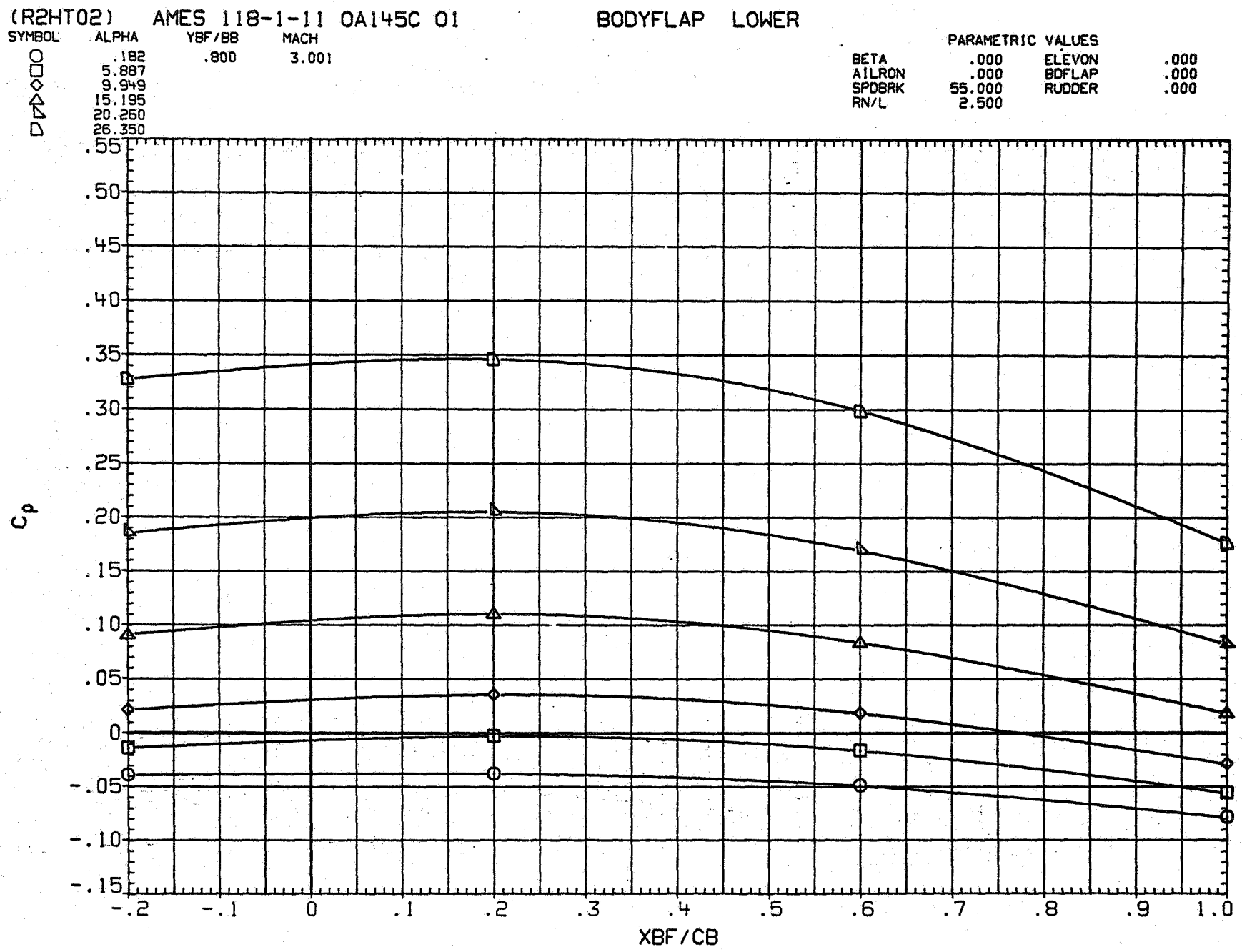


FIG. 106 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

(R2HT56) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.271	.100	3.001
□	4.995		
◇	10.064		
△	15.148		
◁	20.268		
D	25.441		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	-11.700
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

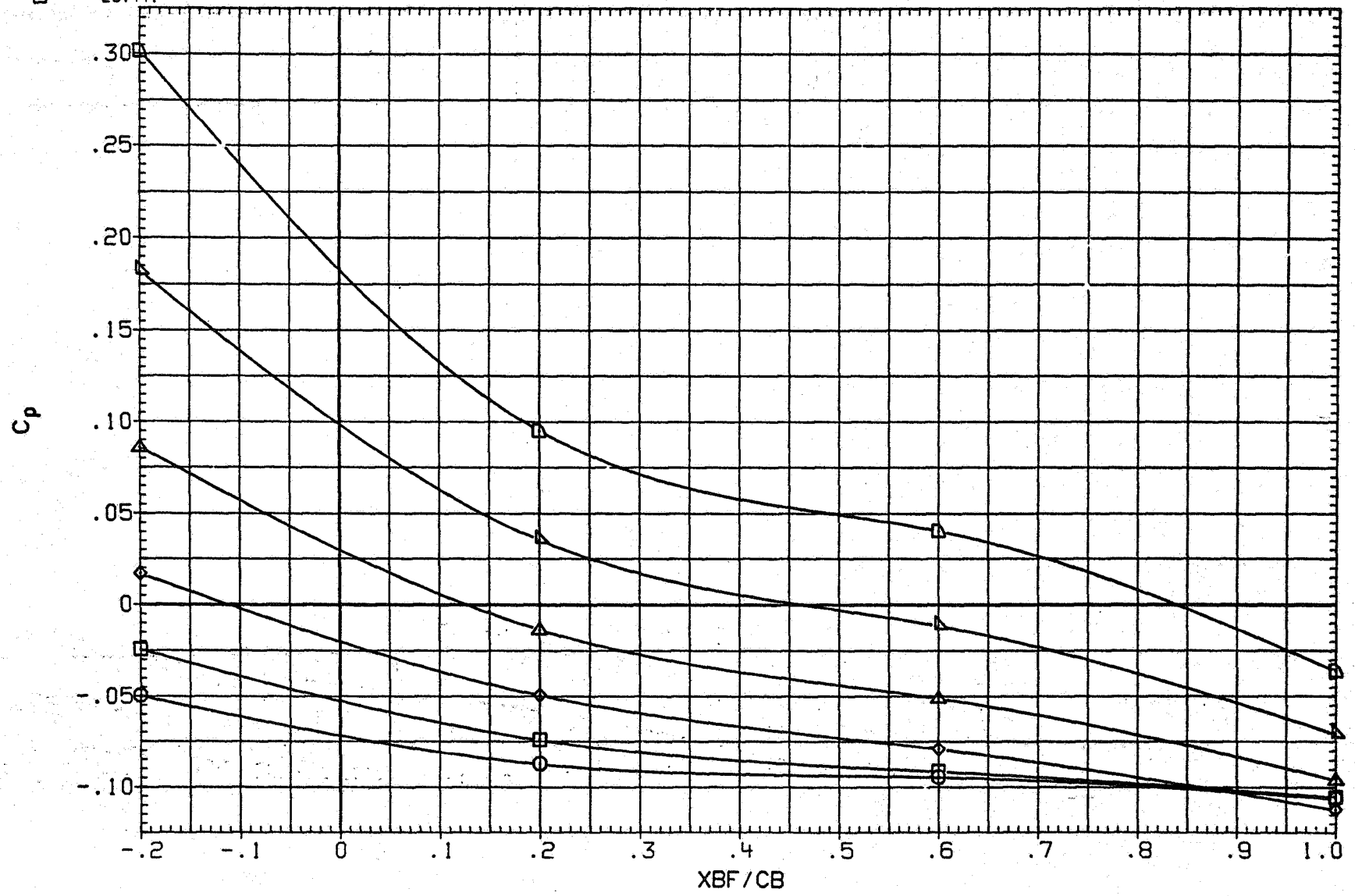


FIG. 107 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

(R2HT56) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.271	.200	3.001
□	4.995		
◇	10.064		
△	15.148		
◁	20.268		
D	25.441		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	-11.700
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

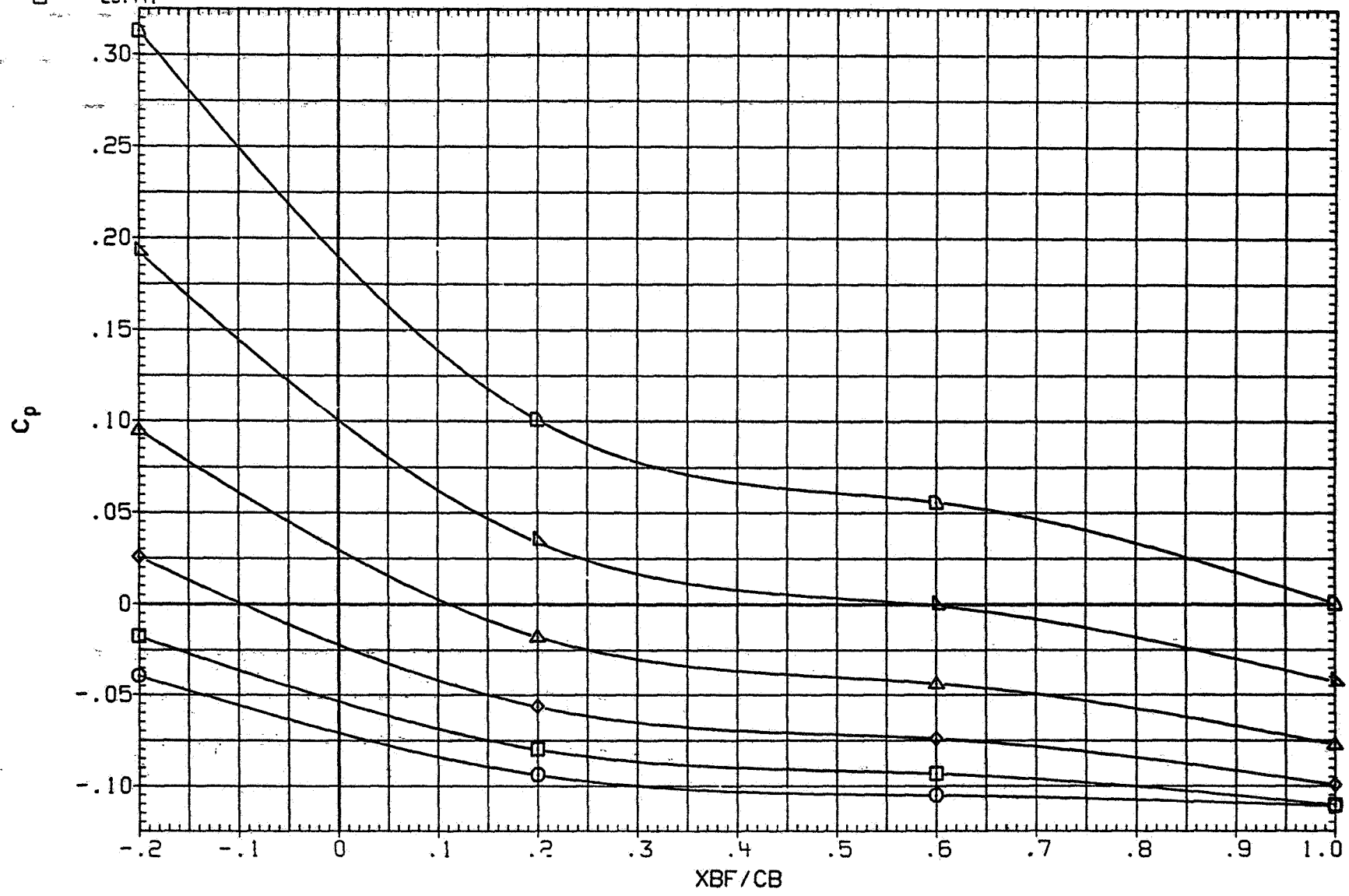


FIG. 107 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

(R2HT56) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.271	.350	3.001
□	4.995		
◇	10.064		
△	15.148		
◪	20.268		
▷	25.441		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	-11.700
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

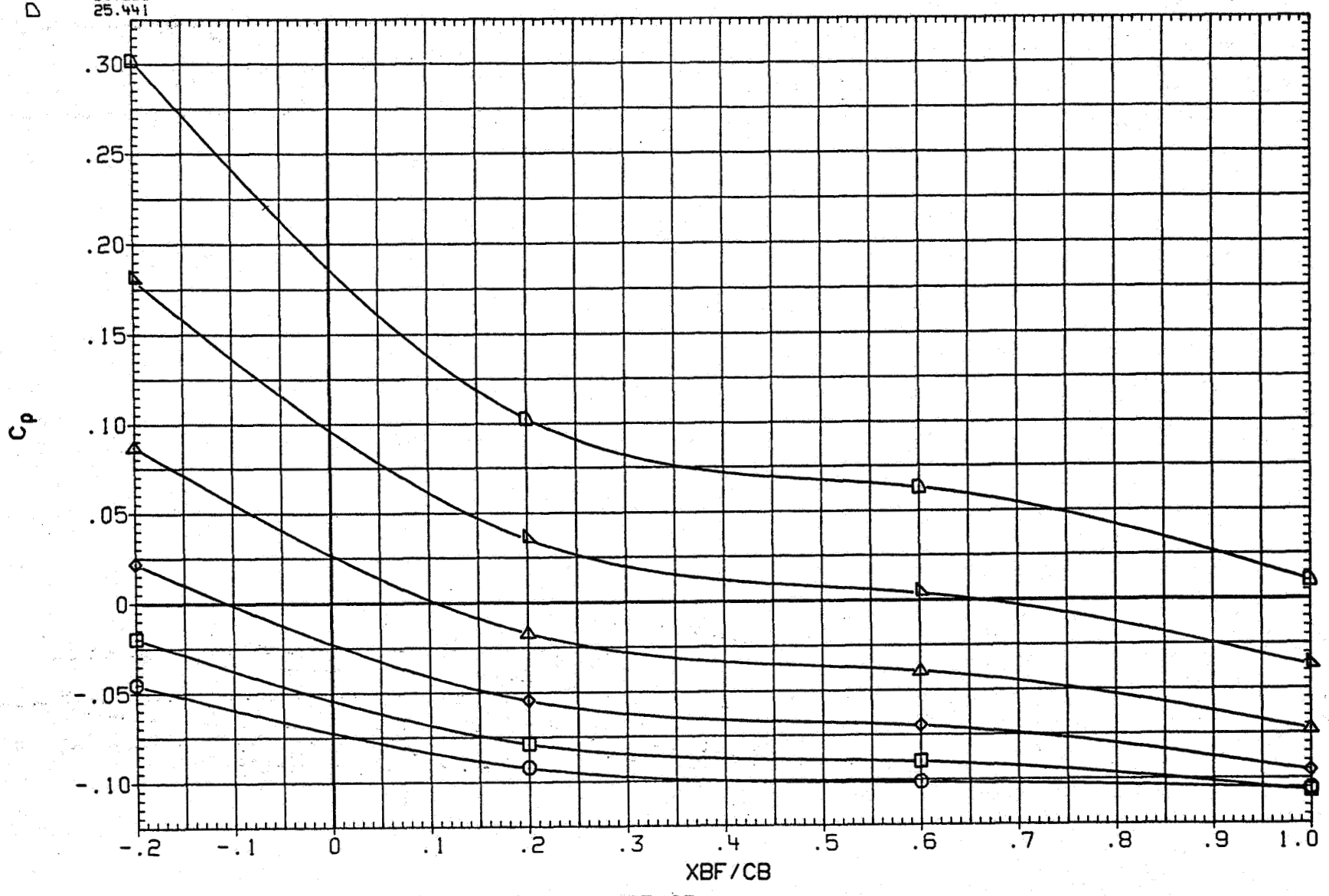


FIG. 107 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

(R2HT56) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.271	.500	3.001
□	4.995		
◇	10.064		
△	15.148		
▽	20.268		
D	25.441		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	-11.700
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

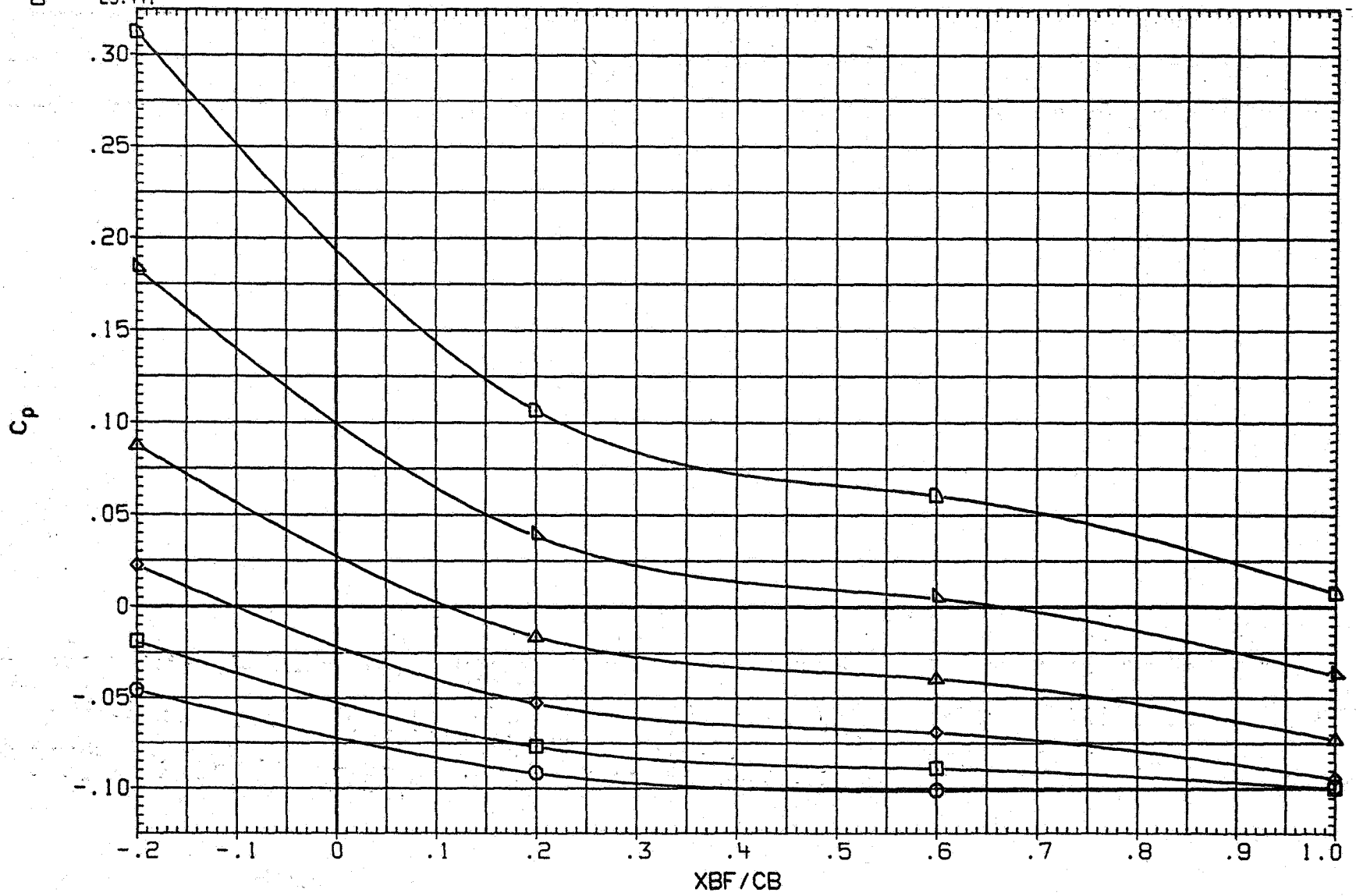


FIG. 107 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

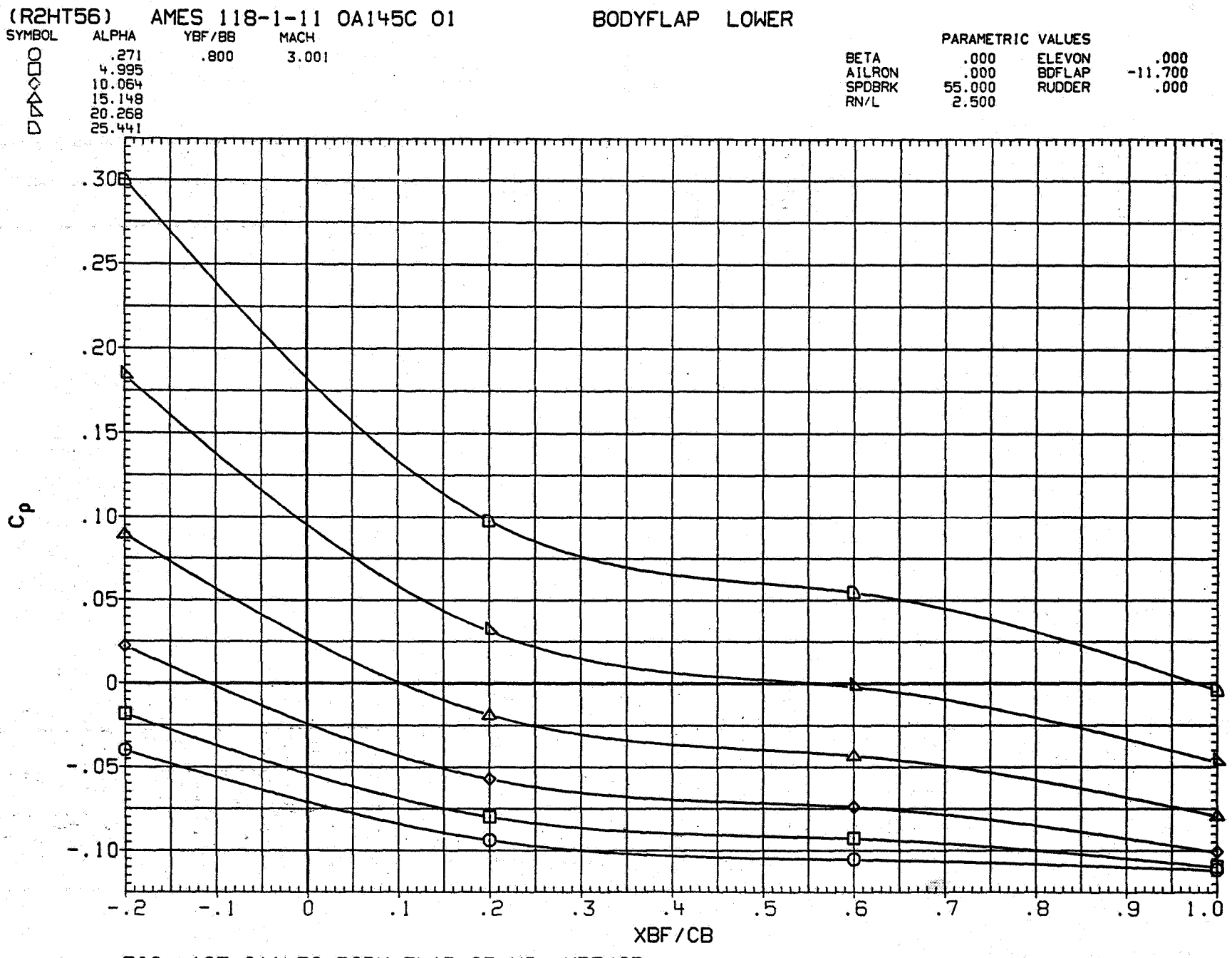


FIG. 107 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

(R2HT57) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.282	.100	3.001
□	4.987		
◇	10.053		
△	15.174		
◁	20.223		
D	25.430		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	16.300
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

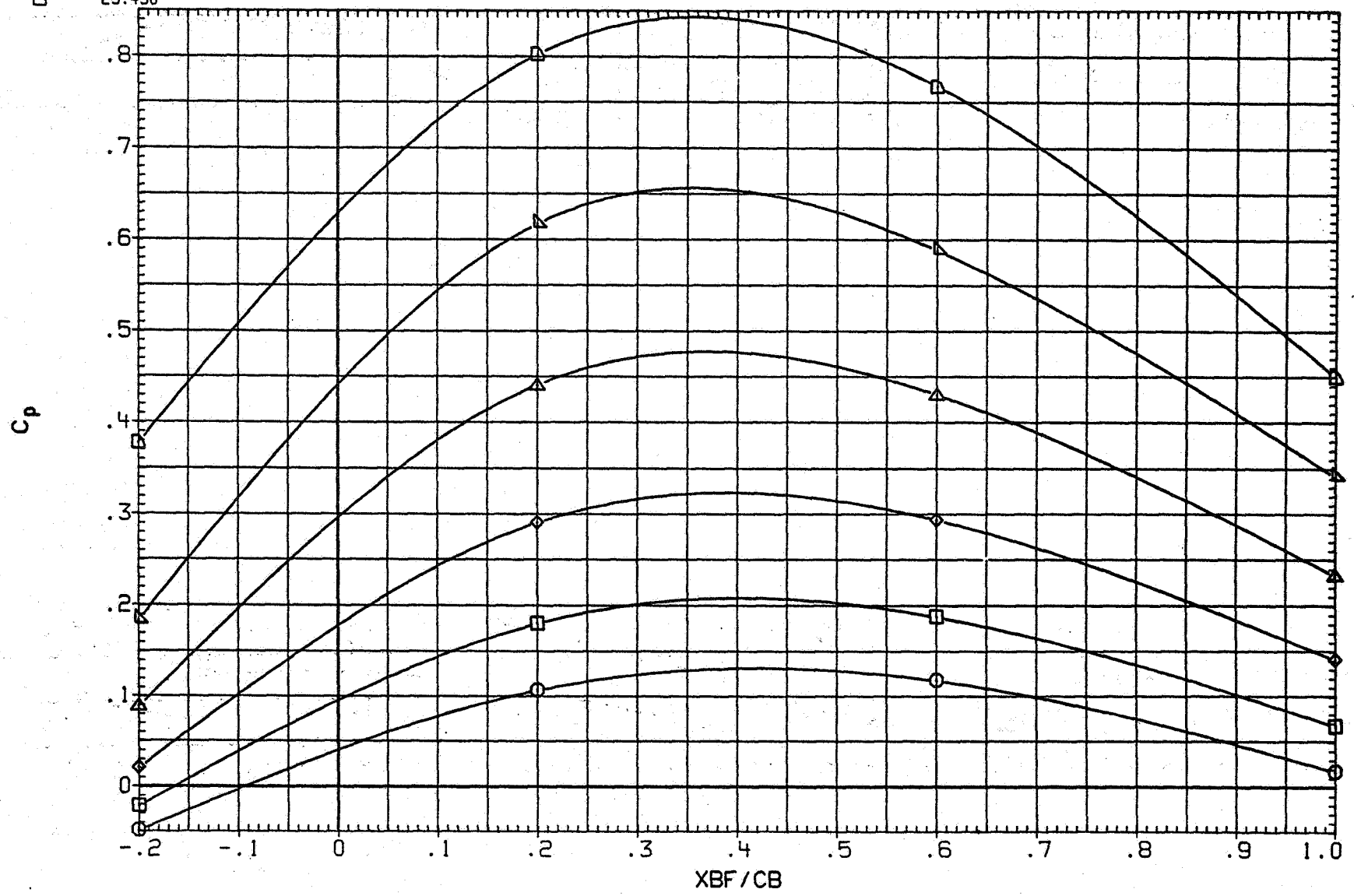


FIG. 108 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

(R2HT57) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.282	.200	3.001
□	4.987		
◇	10.053		
△	15.174		
⊿	20.223		
D	25.430		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	16.300
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

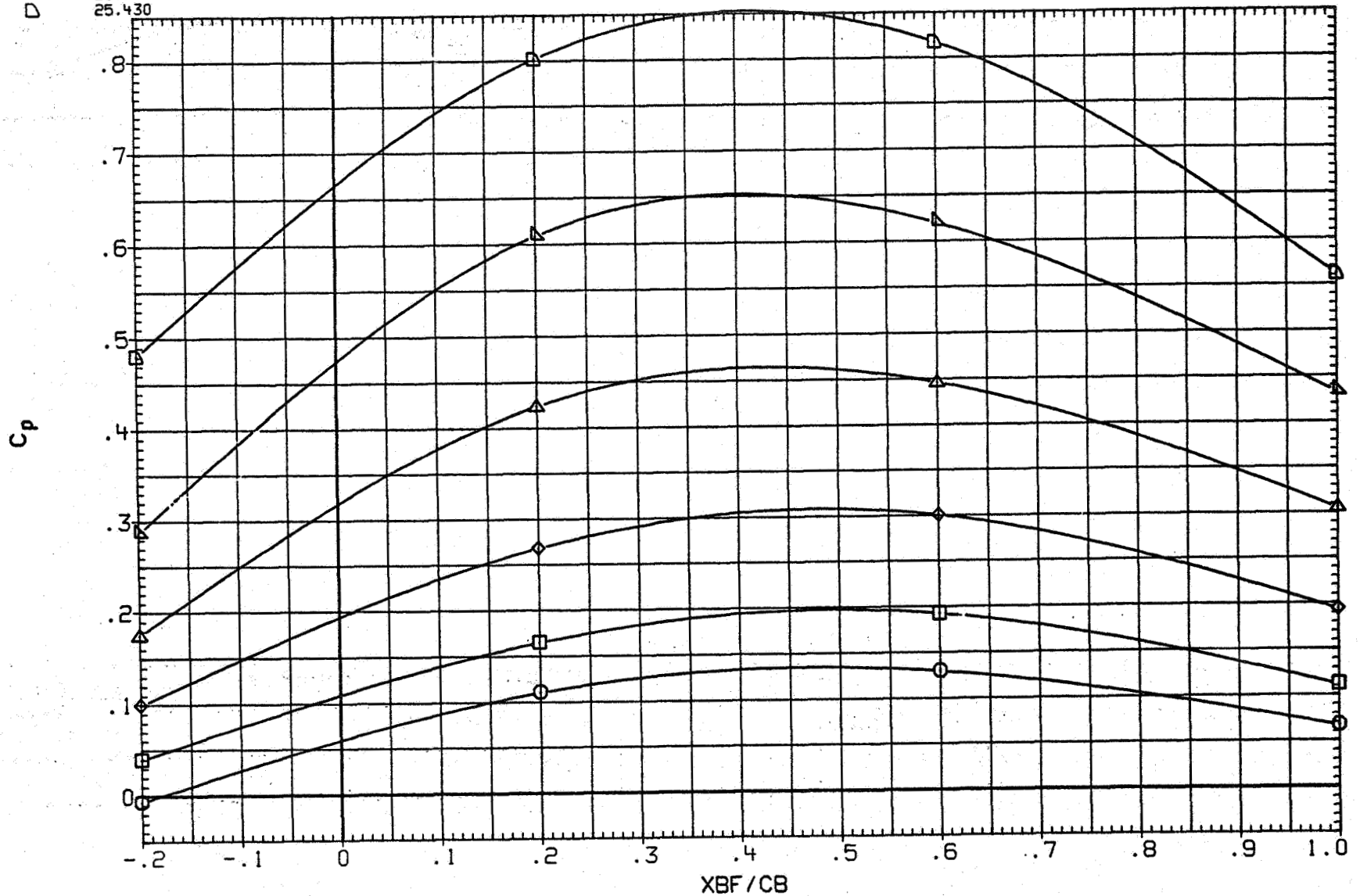


FIG. 108 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

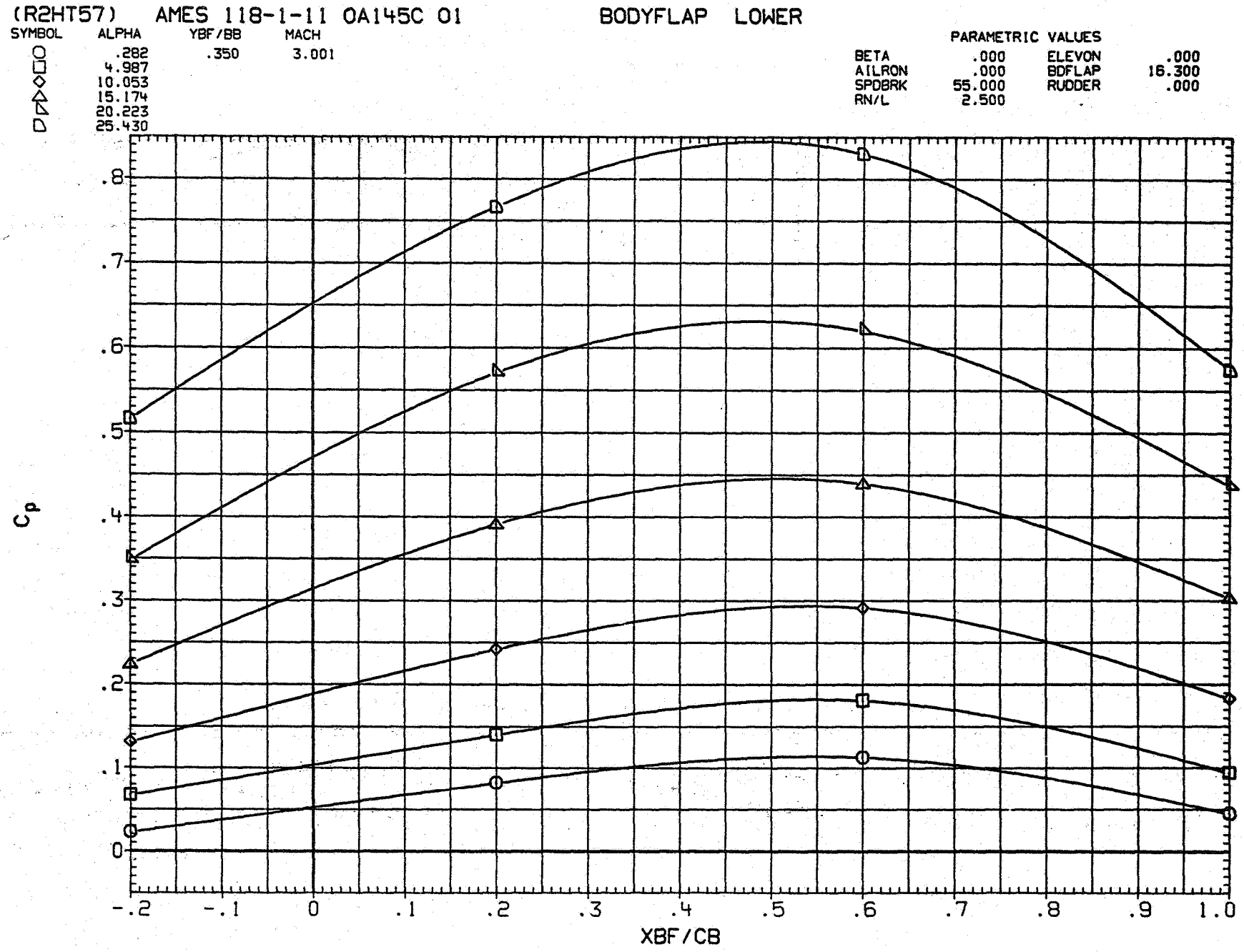


FIG. 108 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

(R2HT57) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.282	.500	3.001
□	4.987		
◇	10.053		
△	15.174		
◁	20.223		
D	25.430		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	16.300
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

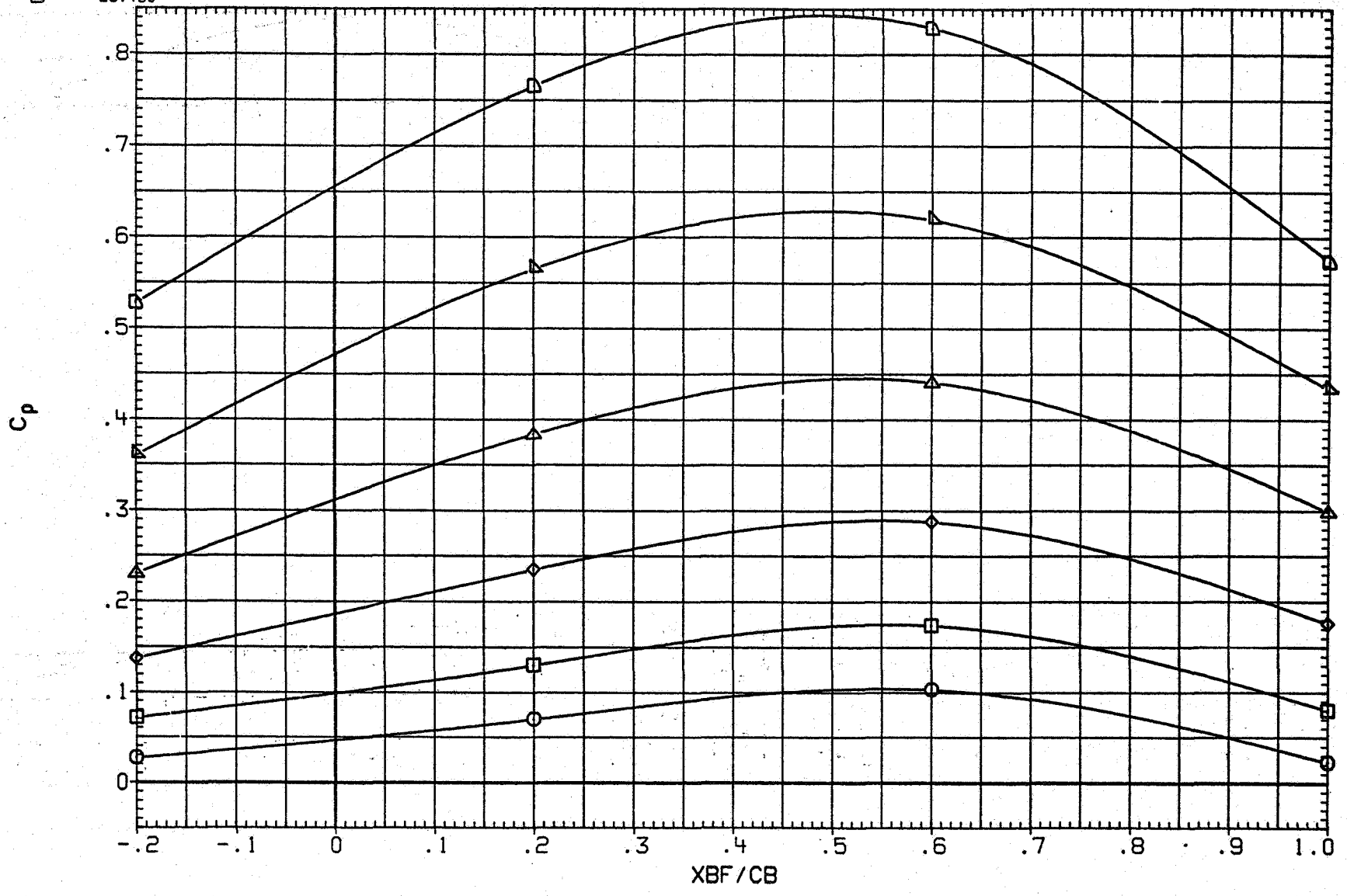


FIG. 108 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

(R2HT57) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.282	.800	3.001
□	4.987		
◇	10.053		
△	15.174		
⊿	20.223		
D	25.430		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	16.300
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

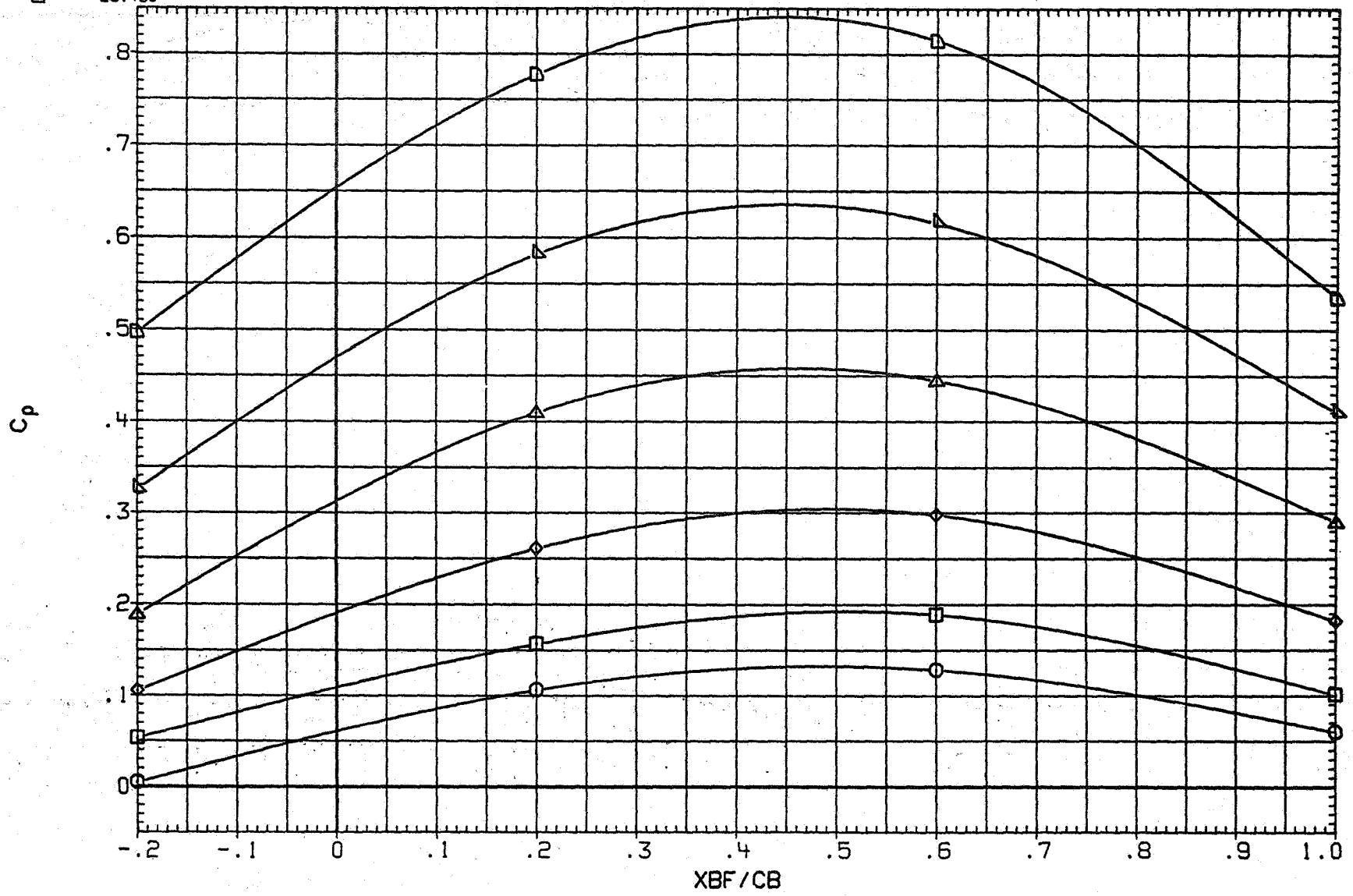


FIG. 108 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

(R2HT58) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.273	.100	3.001
□	4.974		
◇	10.110		
△	15.157		
◁	20.274		
▷	25.435		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	22.500
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

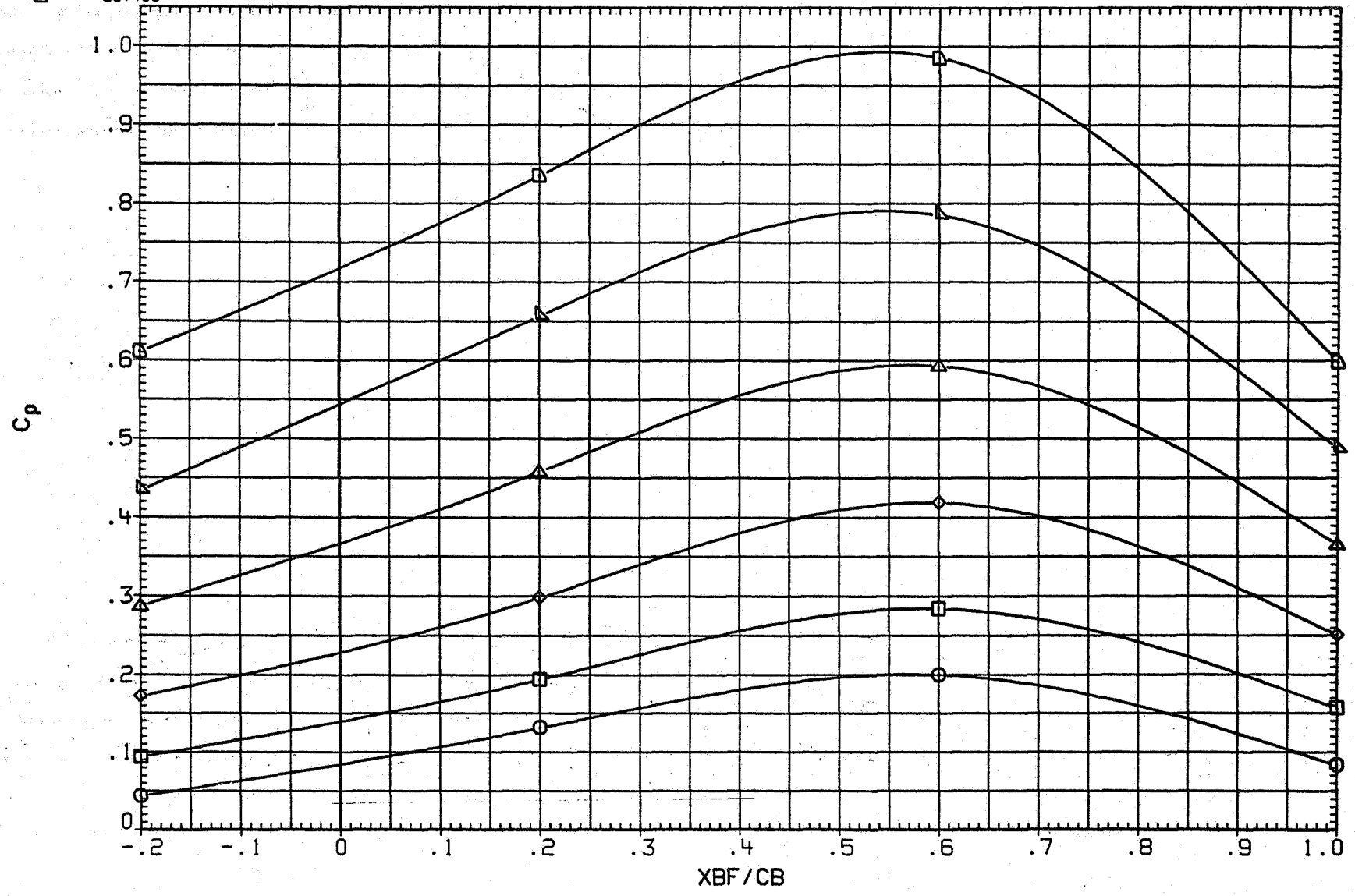


FIG. 109 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HT58) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.273	.200	3.001
□	4.974		
◇	10.110		
△	15.157		
⊿	20.274		
▱	25.435		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	22.500
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

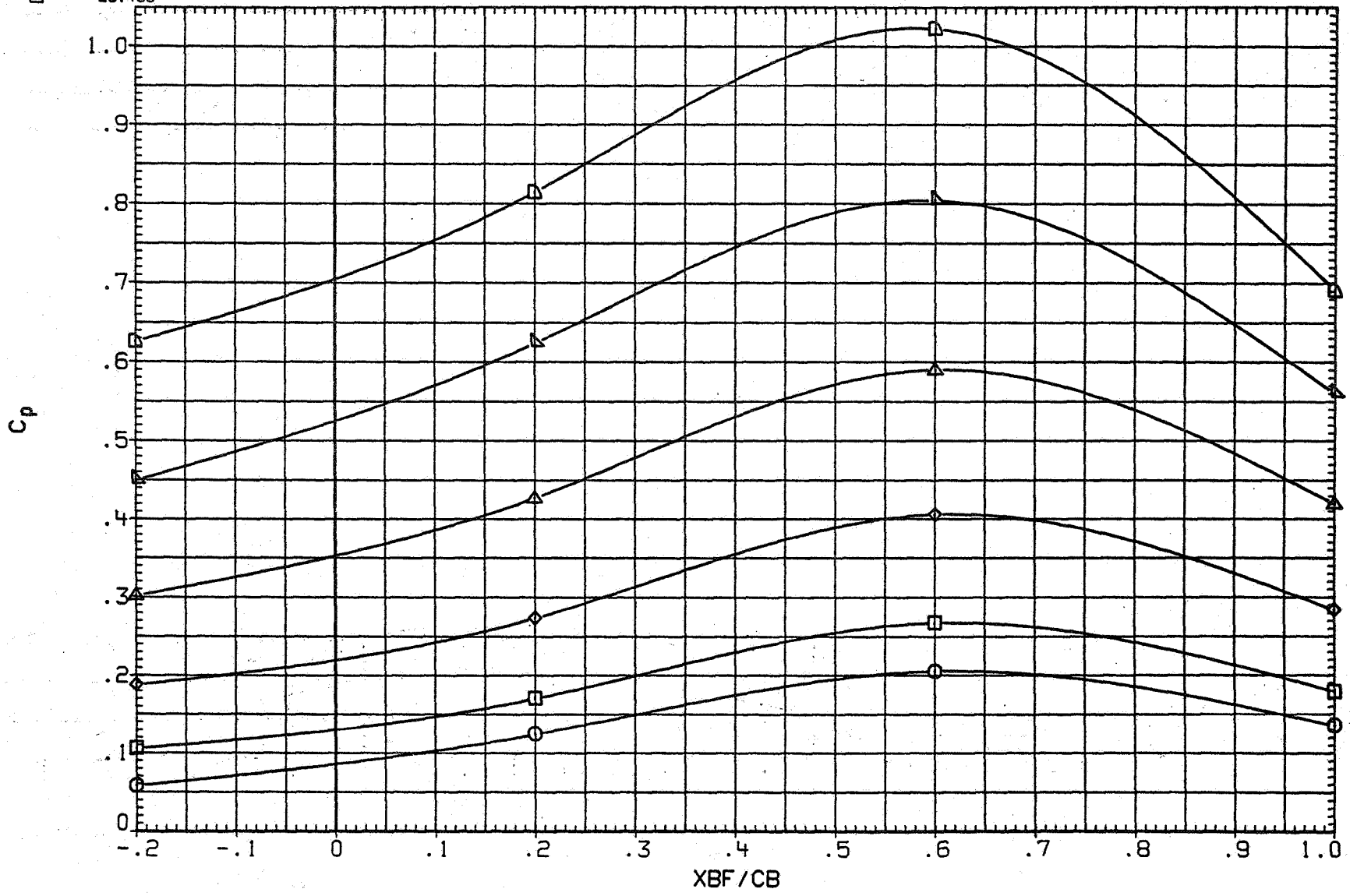


FIG. 109 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HT58) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.273	.350	3.001
□	4.974		
◇	10.110		
△	15.157		
⊿	20.274		
D	25.435		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	22.500
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

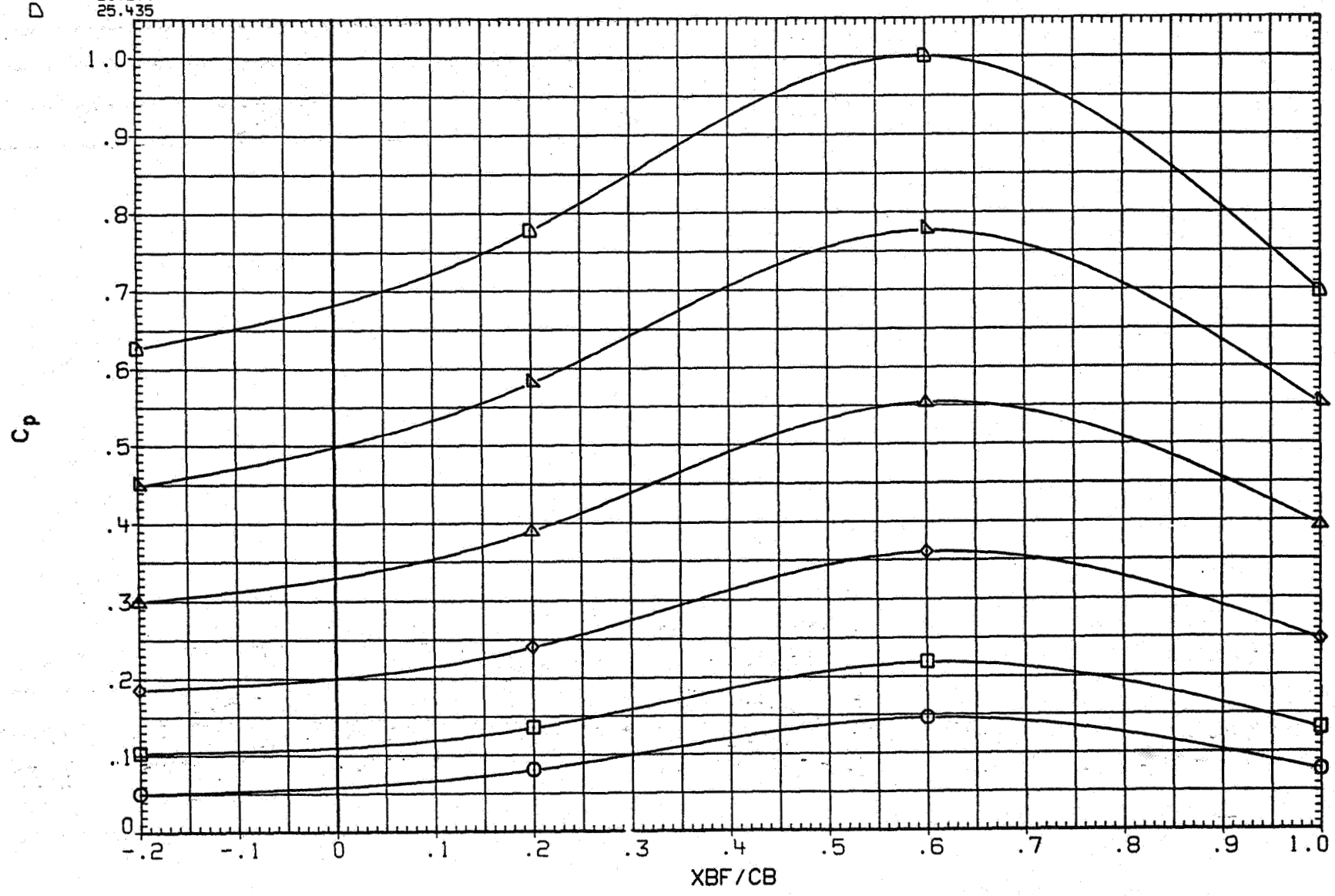


FIG. 109 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HT58) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.273	.500	3.001
□	4.974		
◇	10.116		
△	15.157		
◁	20.274		
▱	25.435		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	22.500
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

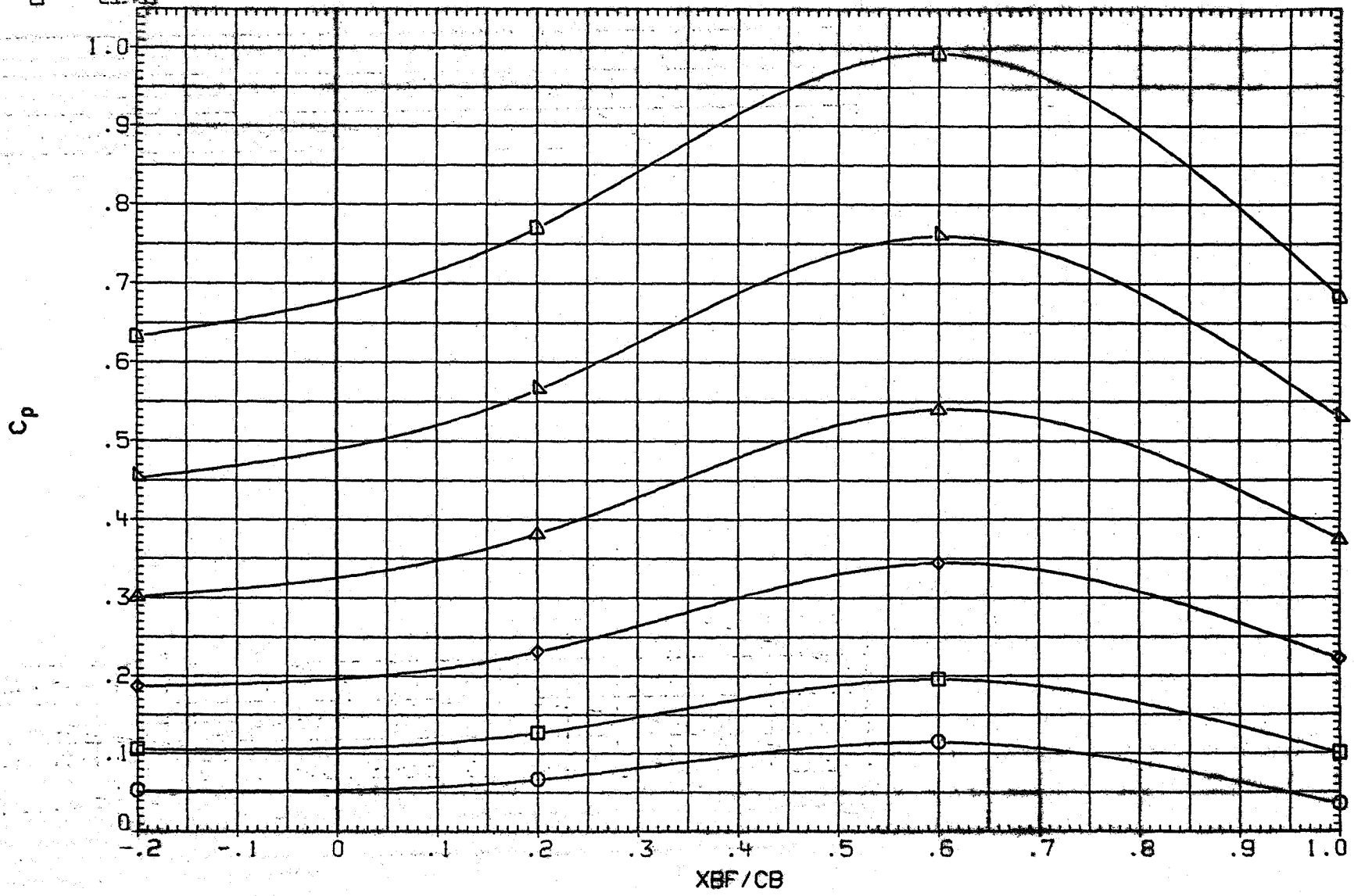


FIG. 109 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HT58) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	YBF/BB	MACH
○	.273	.800	3.001
□	4.974		
◇	10.110		
△	15.157		
◁	20.274		
D	25.435		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	22.500
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

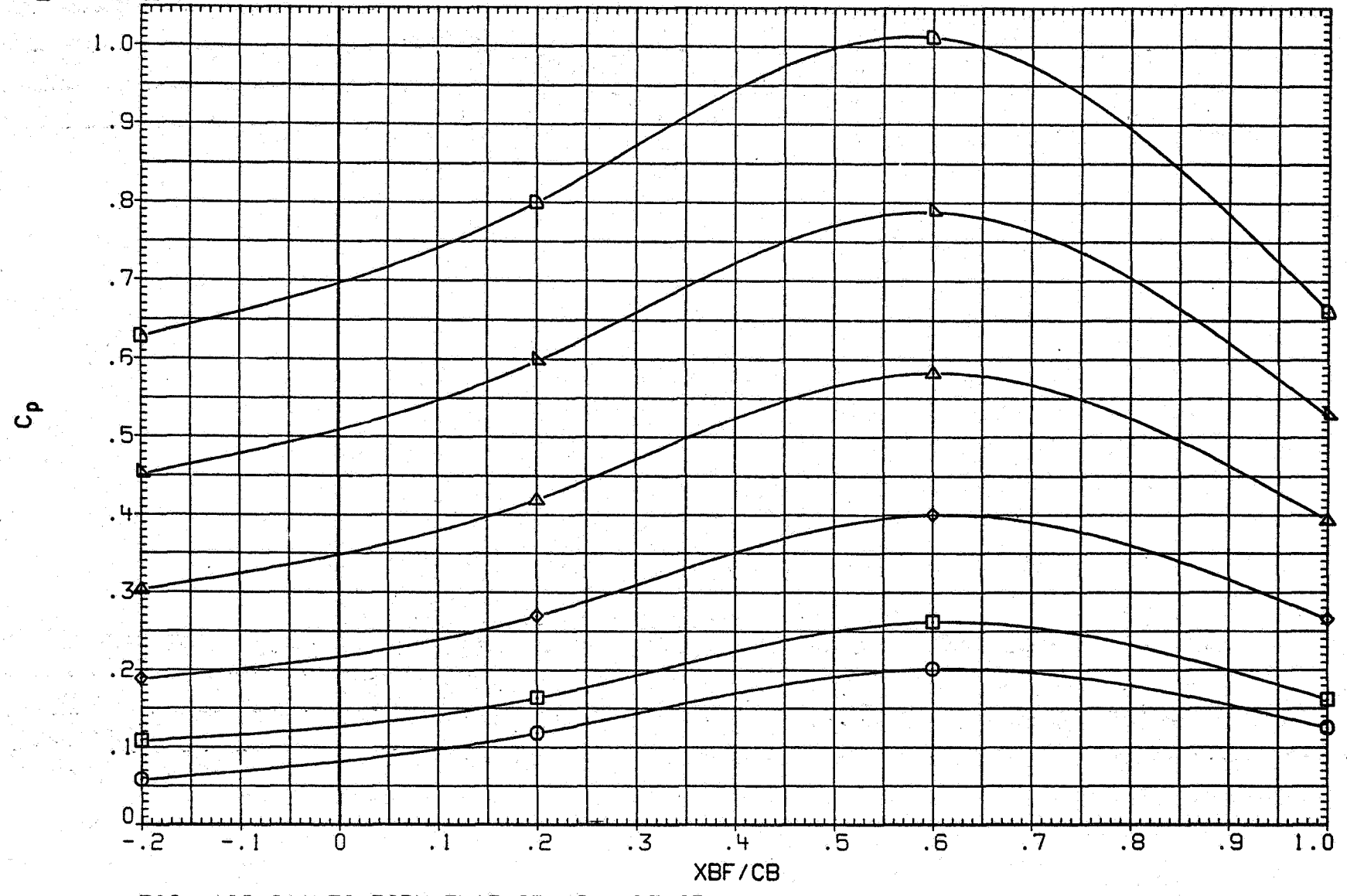


FIG. 109 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HT59) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.100	3.001
□	.029		
◇	8.010		
△	16.339		
◁	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

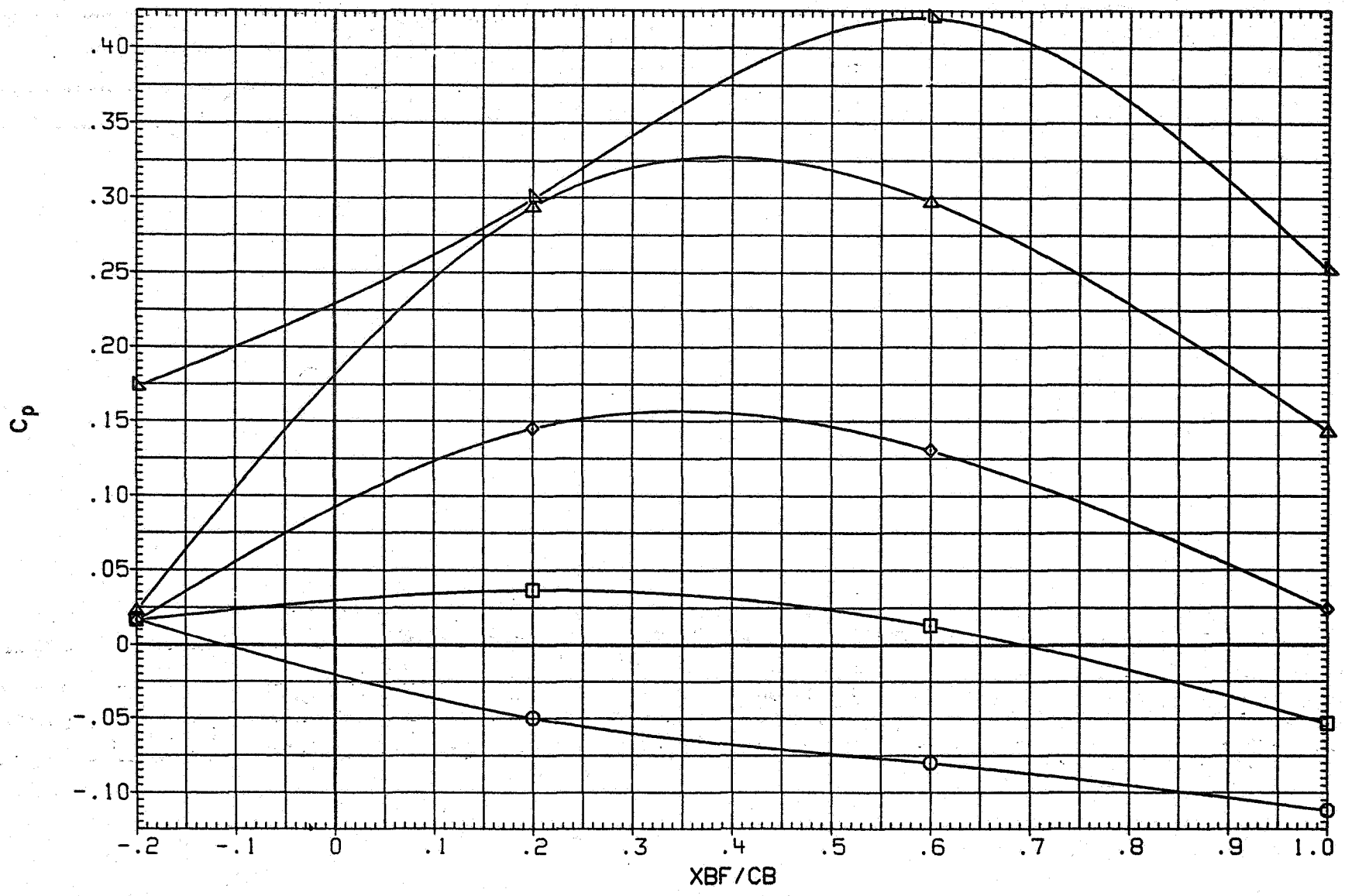


FIG. 110 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

(R2HT59) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.200	3.001
□	.029		
◇	8.010		
△	16.339		
◁	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

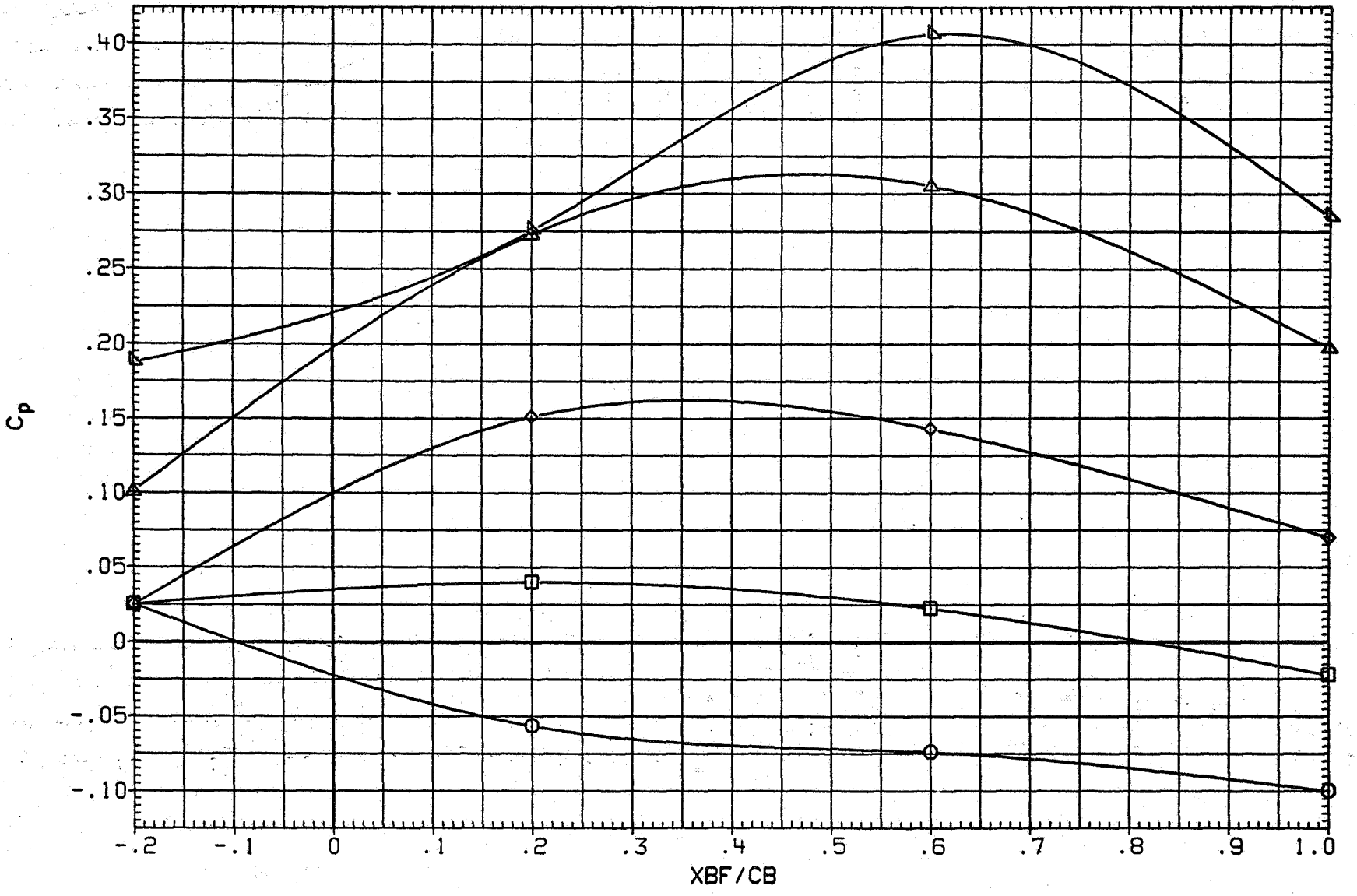


FIG. 110 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

(R2HT59) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.350	3.001
□	.029		
◇	8.010		
△	16.339		
◁	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

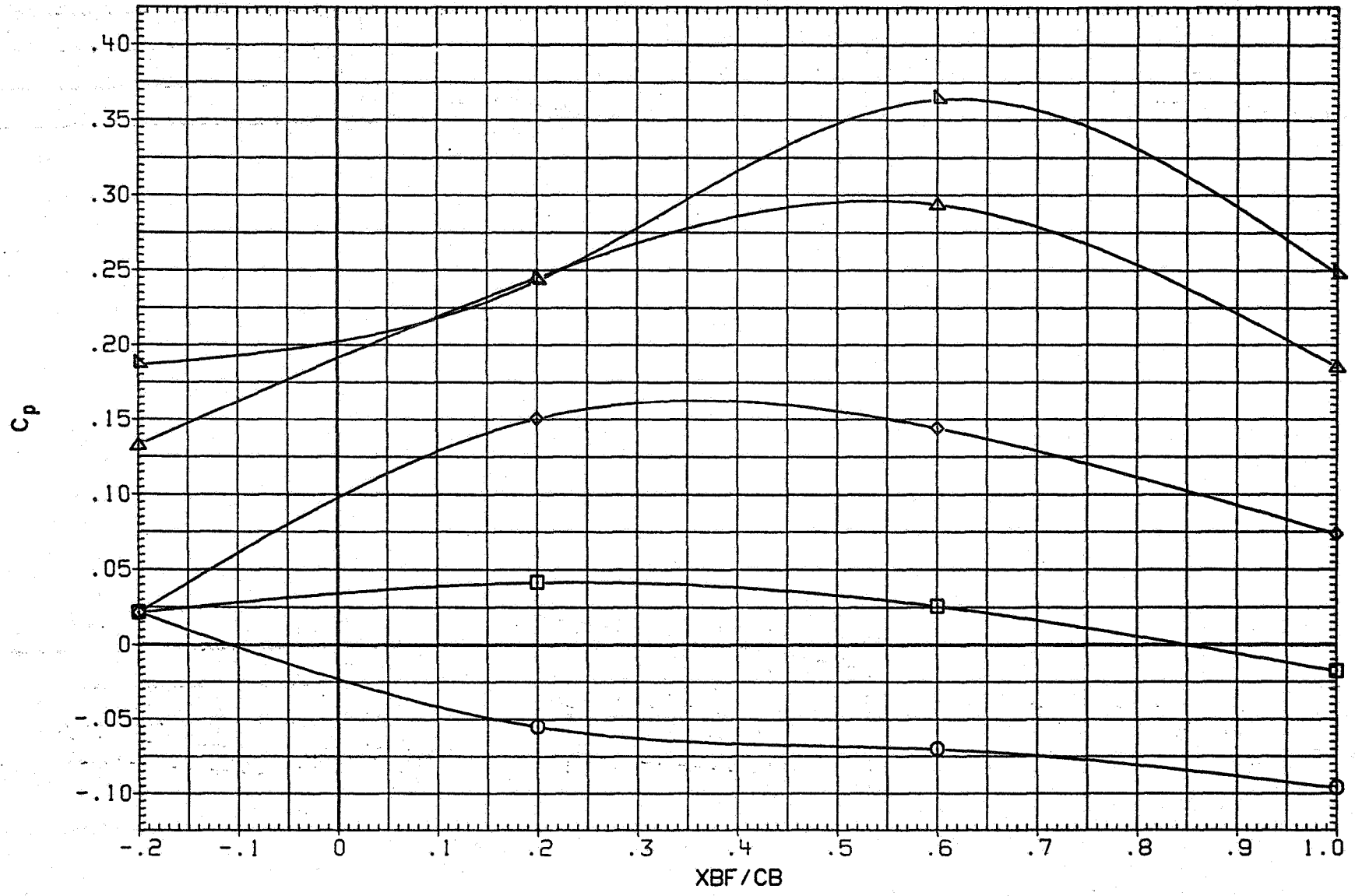


FIG. 110 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

(R2HT59) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.500	3.001
□	.029		
◇	8.010		
△	16.339		
◁	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

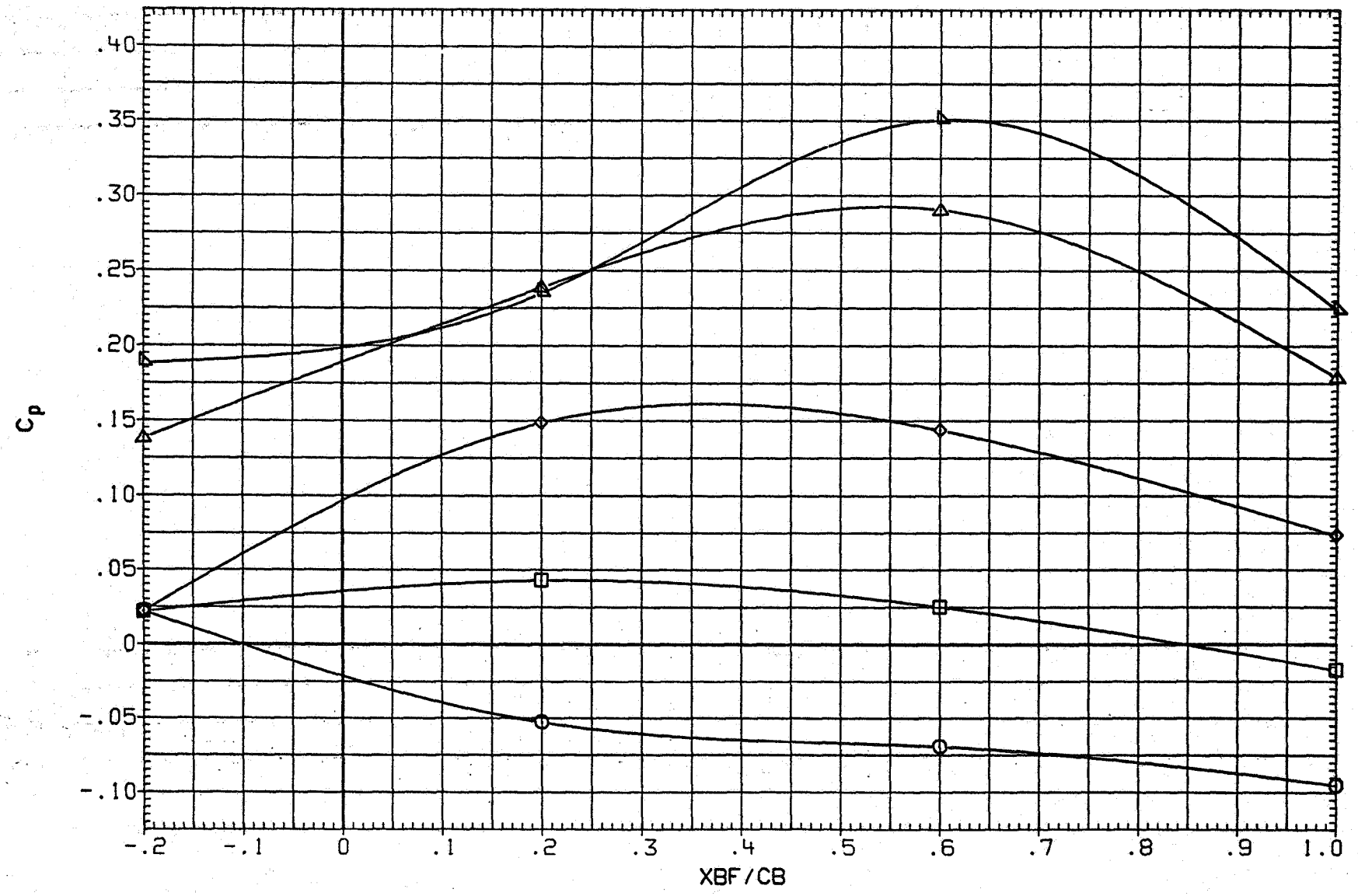


FIG. 110 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

(R2HT59) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.800	3.001
□	.029		
◇	8.010		
△	16.339		
◺	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

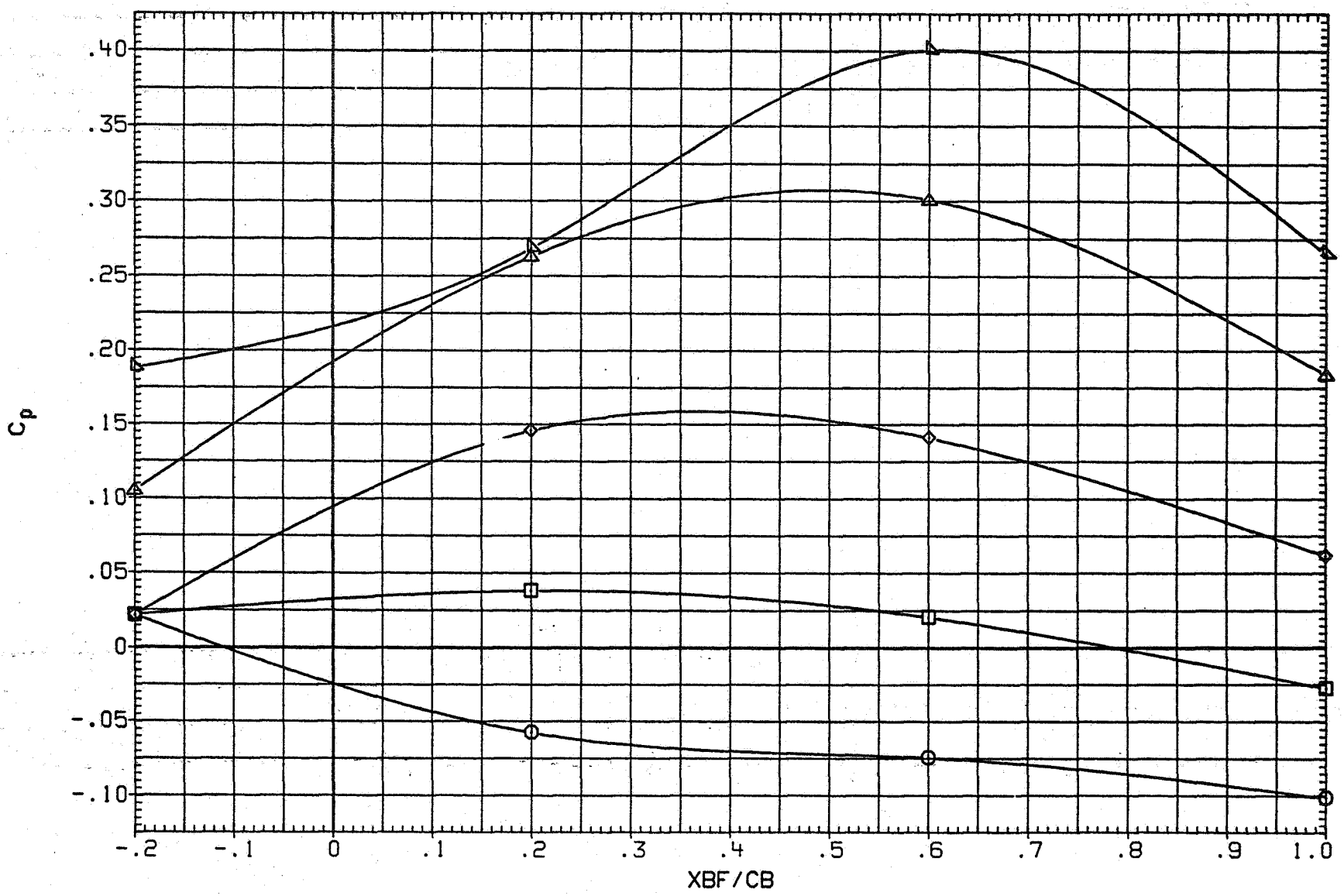


FIG. 110 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

(R2HT60) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.100	3.000
□	.019		
◇	7.990		
△	16.339		
◁	22.604		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

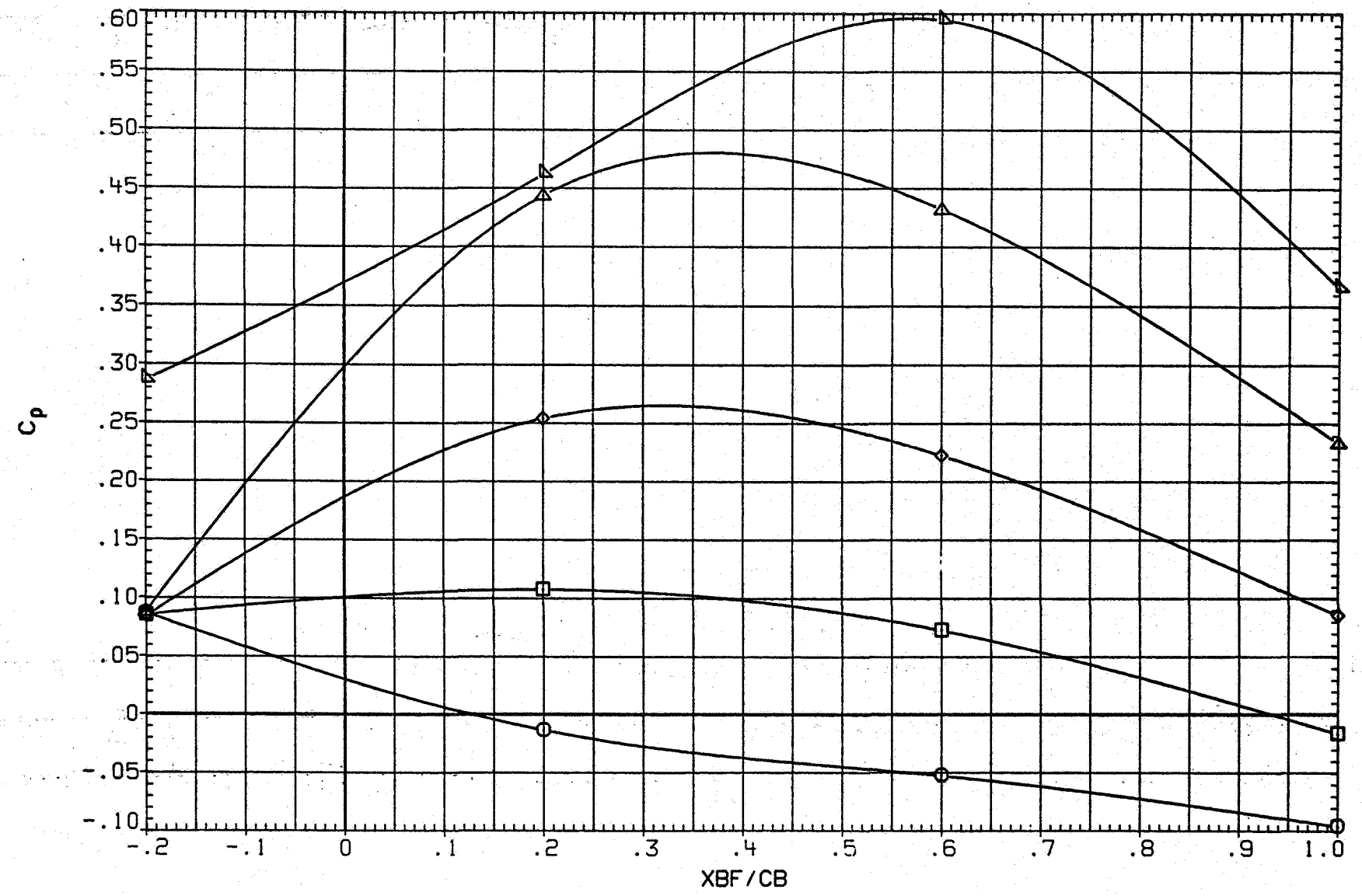


FIG. 111 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

(R2HT60) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.200	3.000
□	.019		
◇	7.990		
△	16.339		
◁	22.604		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

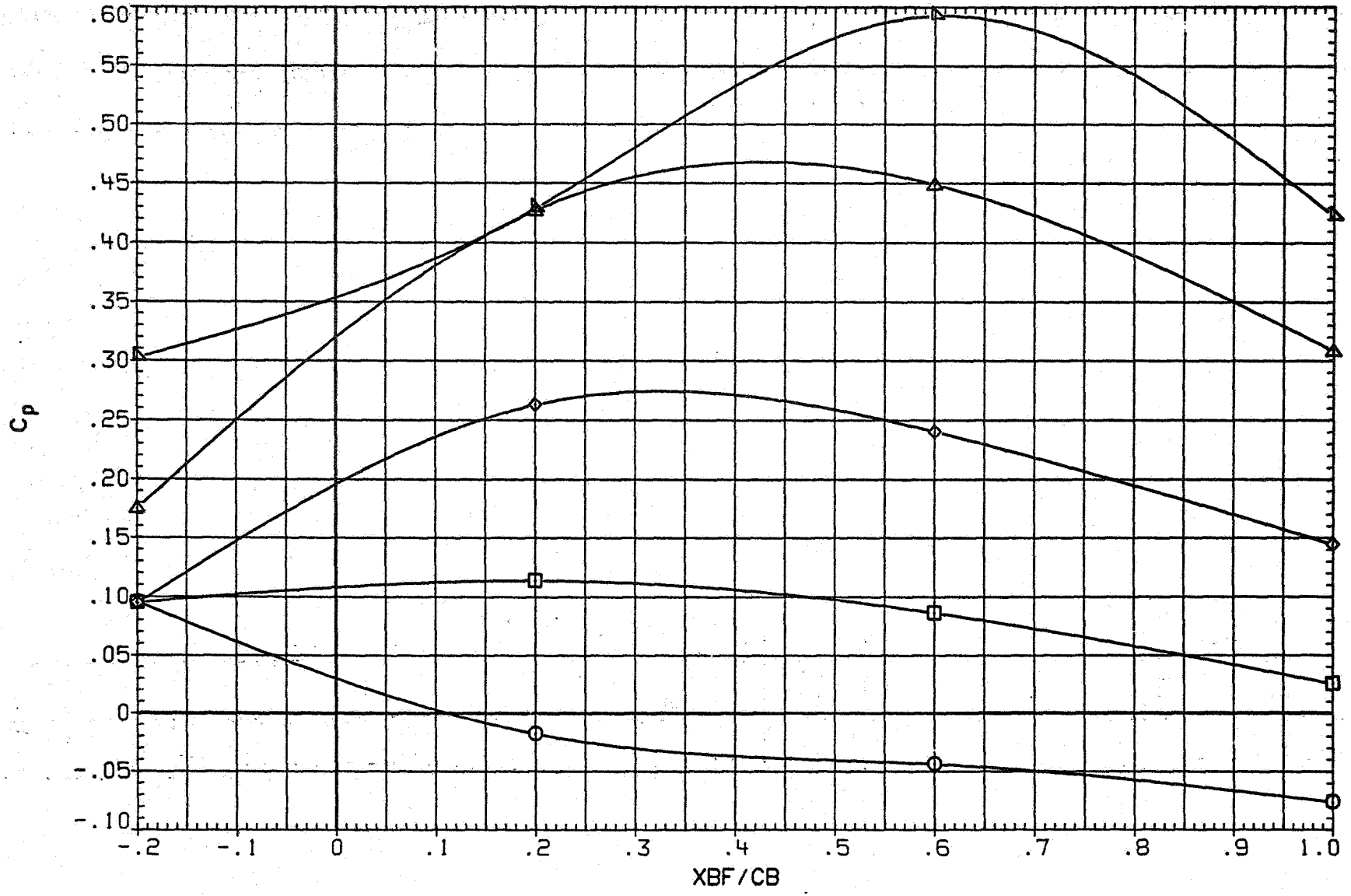


FIG. 111 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

(R2HT60) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.350	3.000
□	.019		
◇	7.990		
△	16.339		
▷	22.604		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

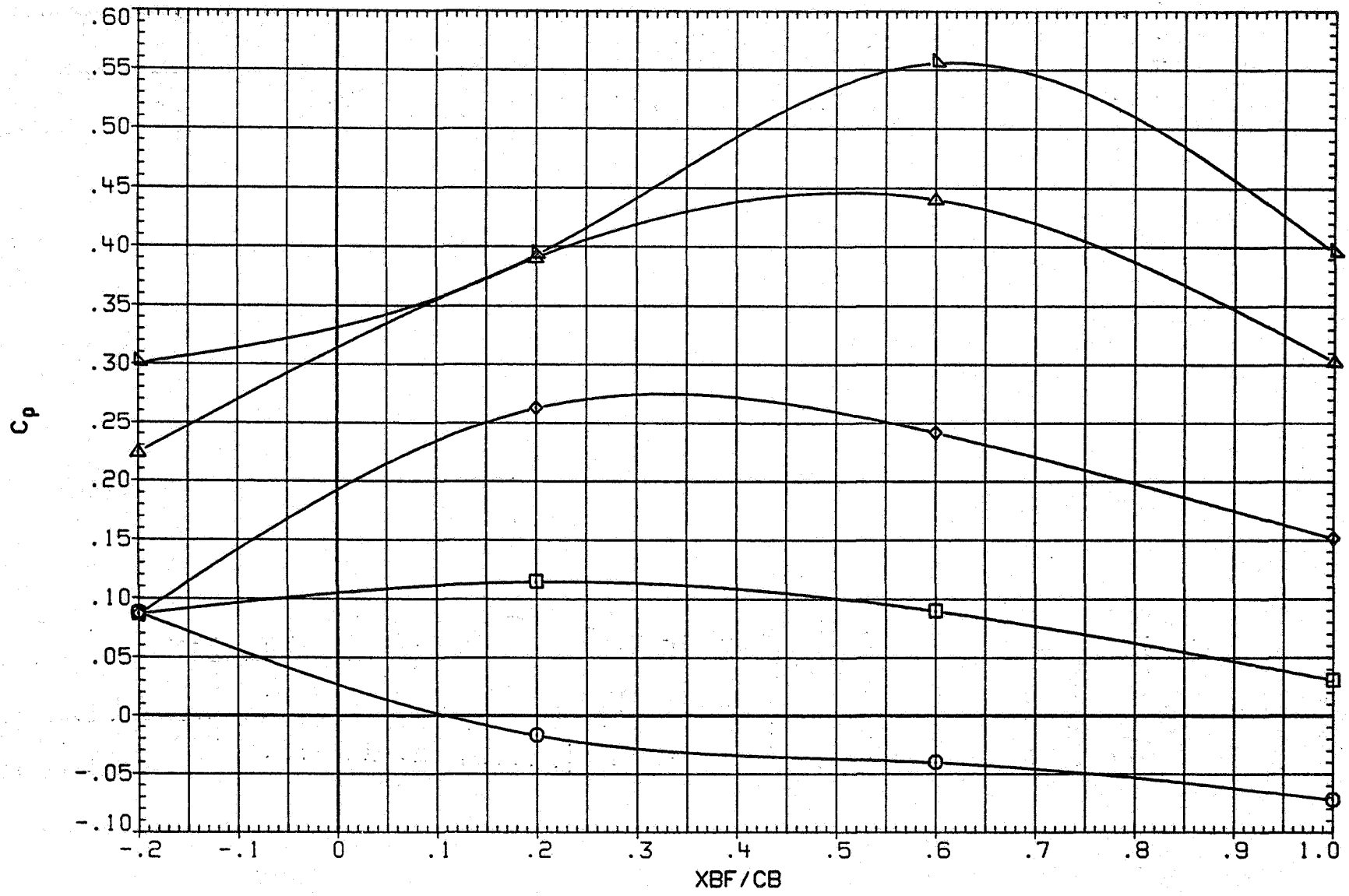


FIG. 111 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

(R2HT60) AMES 118-I-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.500	3.000
□	.019		
◇	7.990		
△	16.339		
◁	22.604		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

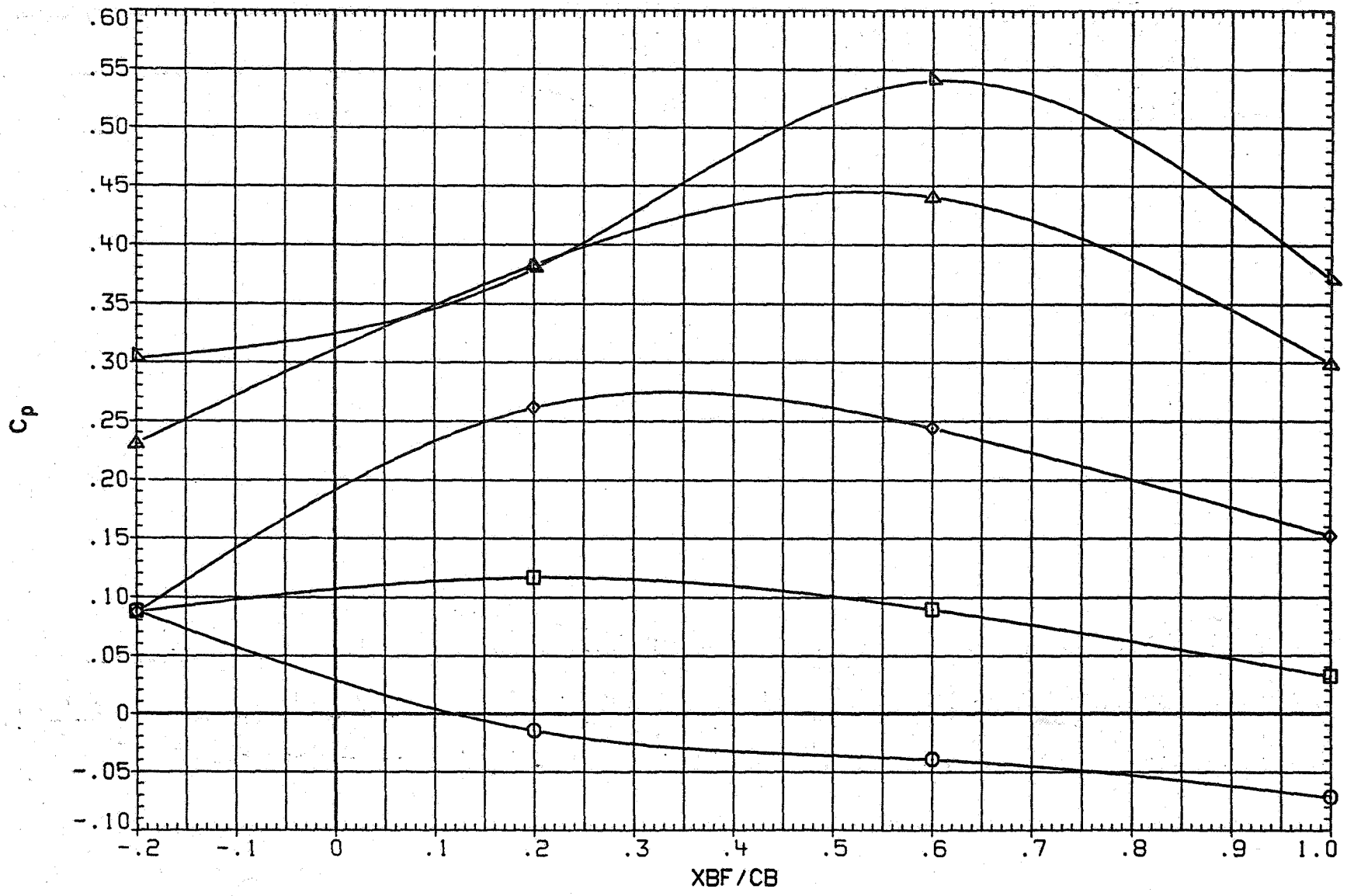


FIG. 111 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

(R2HT60) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.800	3.000
□	.019		
◇	7.990		
△	16.339		
◁	22.604		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

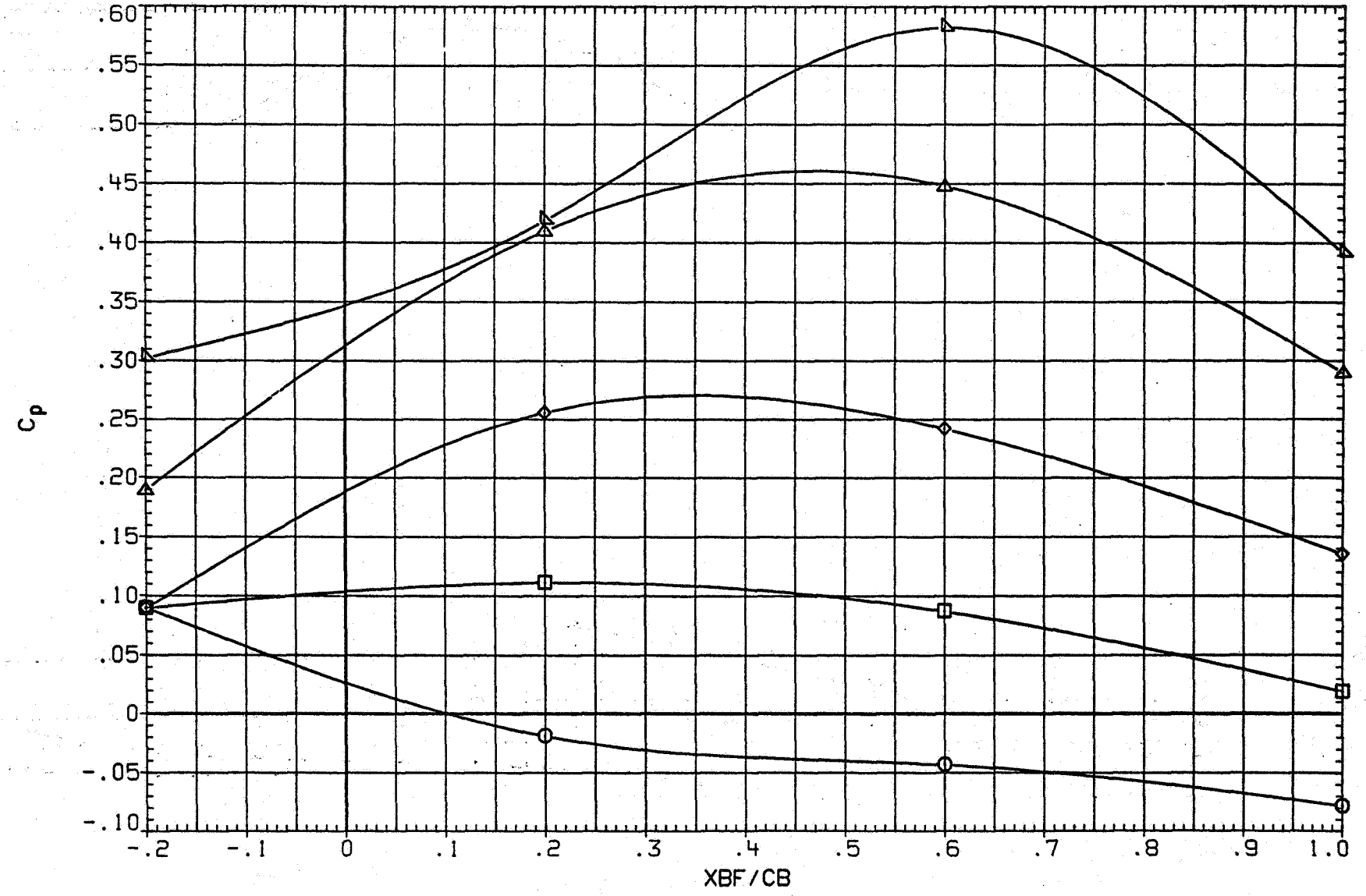


FIG. 111 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

(R2HT61) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.100	3.001
□	.019		
◇	8.020		
△	16.328		
◁	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

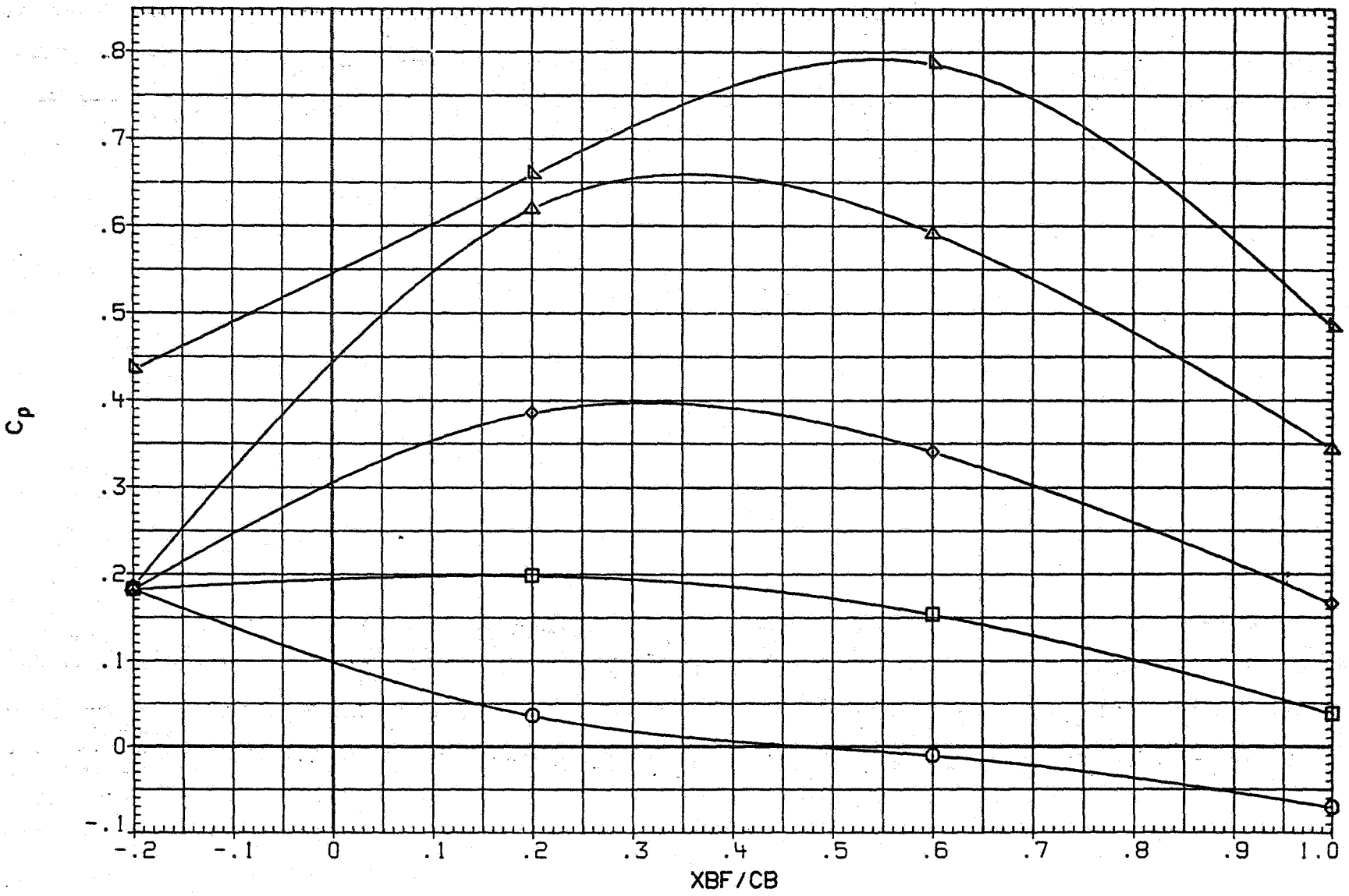


FIG. 112 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

(R2HT61) AMES 118-1-11 OA145C 01

BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.200	3.001
□	.019		
◇	8.020		
△	16.328		
◁	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

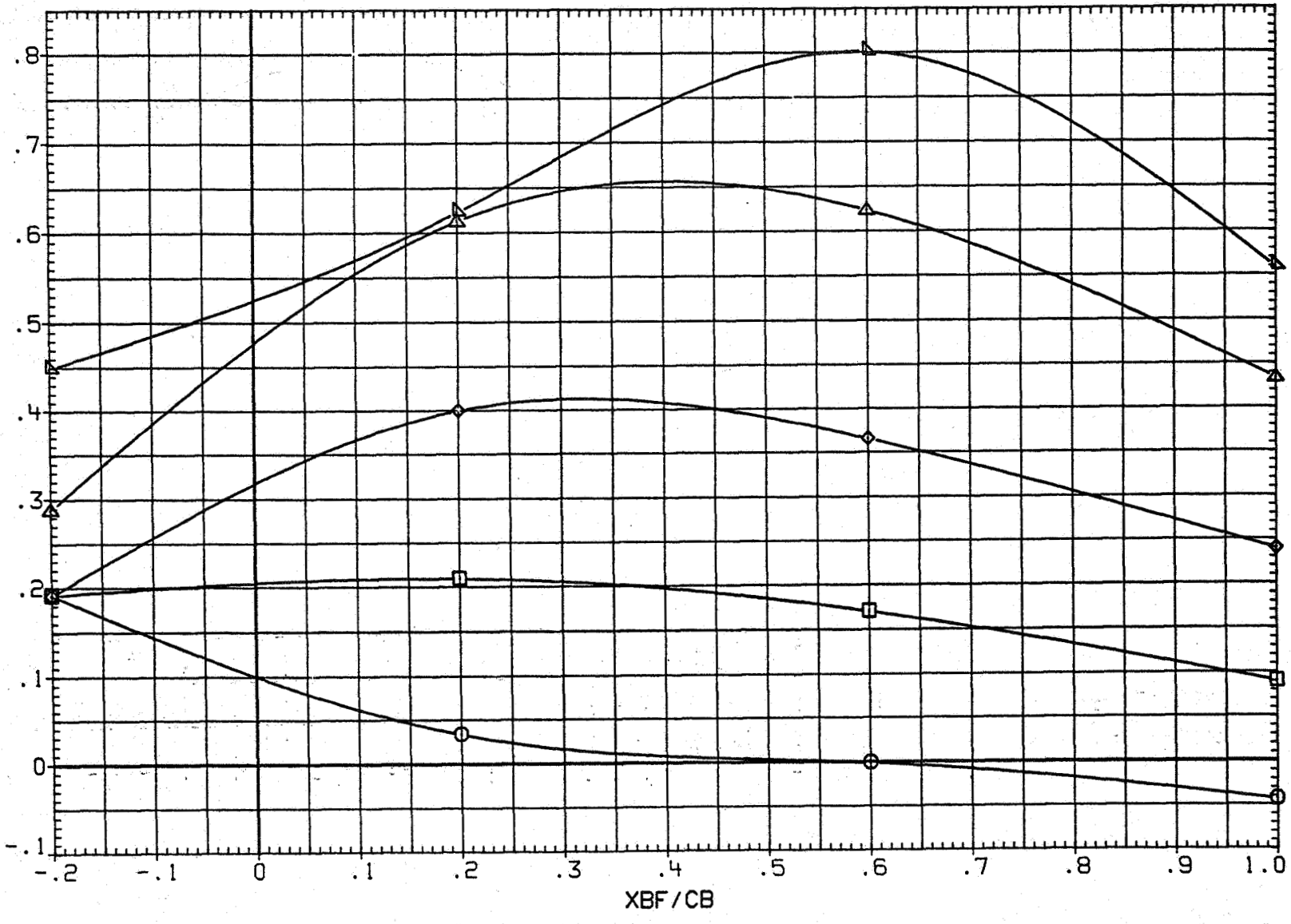


FIG. 112 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

(R2HT61) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.350	3.001
□	.019		
◇	8.020		
△	16.328		
◁	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

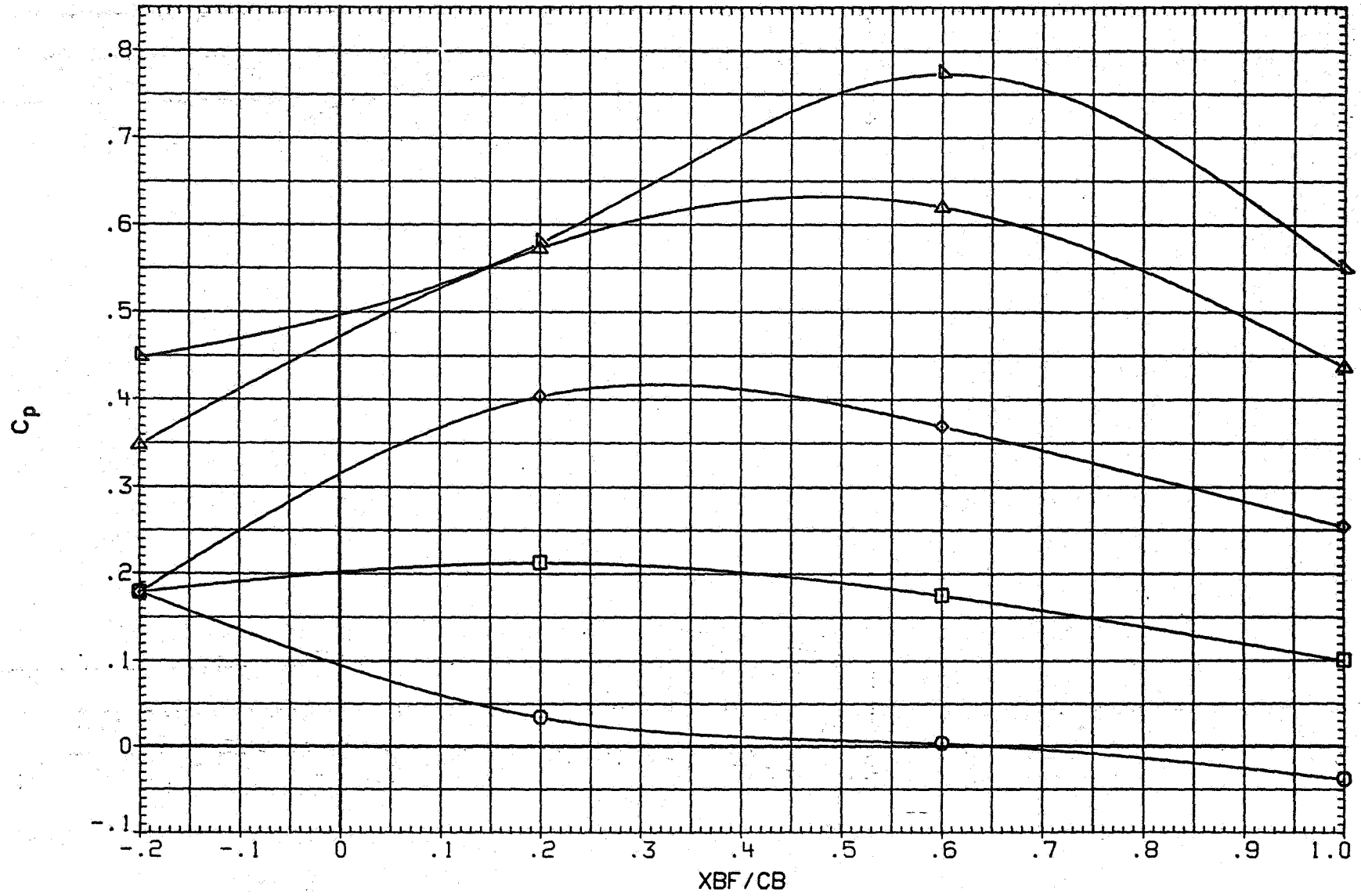


FIG. 112 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

(R2HT61) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.500	3.001
□	.019		
◇	8.020		
△	16.328		
◺	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

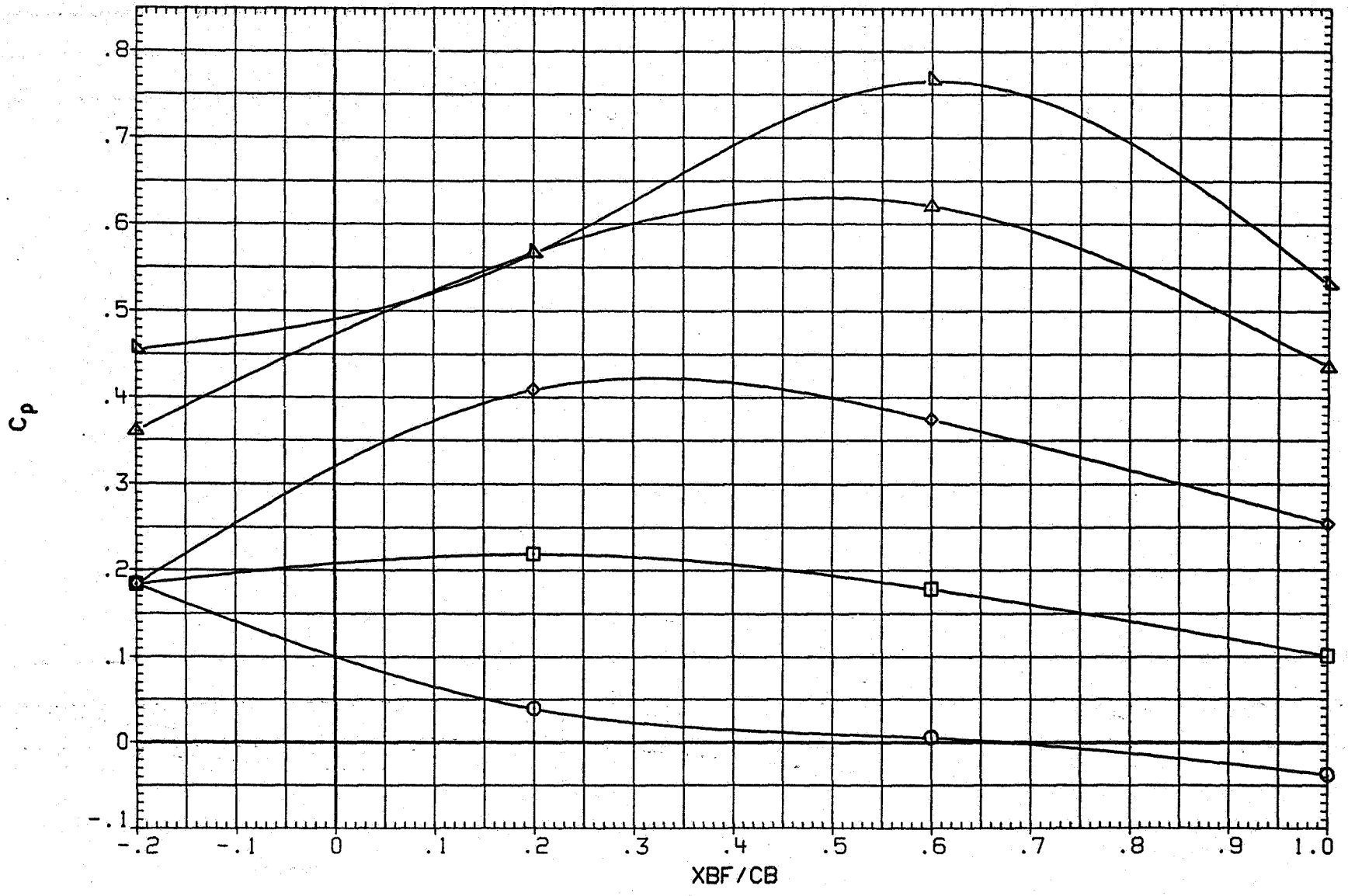


FIG. 112 OA145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

(R2HT61) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	YBF/BB	MACH
○	-11.761	.800	3.001
□	.019		
◇	8.020		
△	16.328		
◁	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

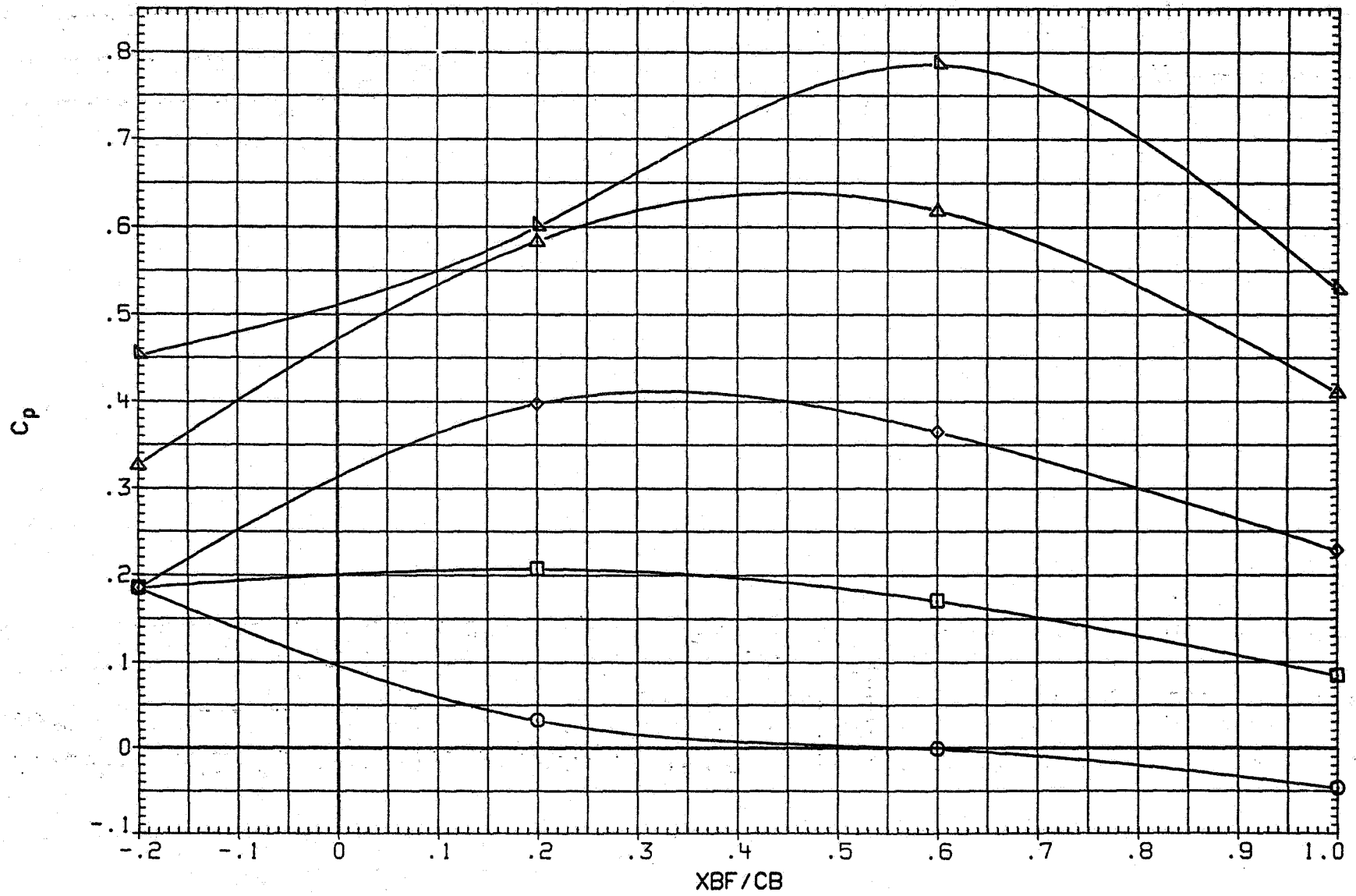


FIG. 112 0A145C BODY FLAP CP VS. XBF/CB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

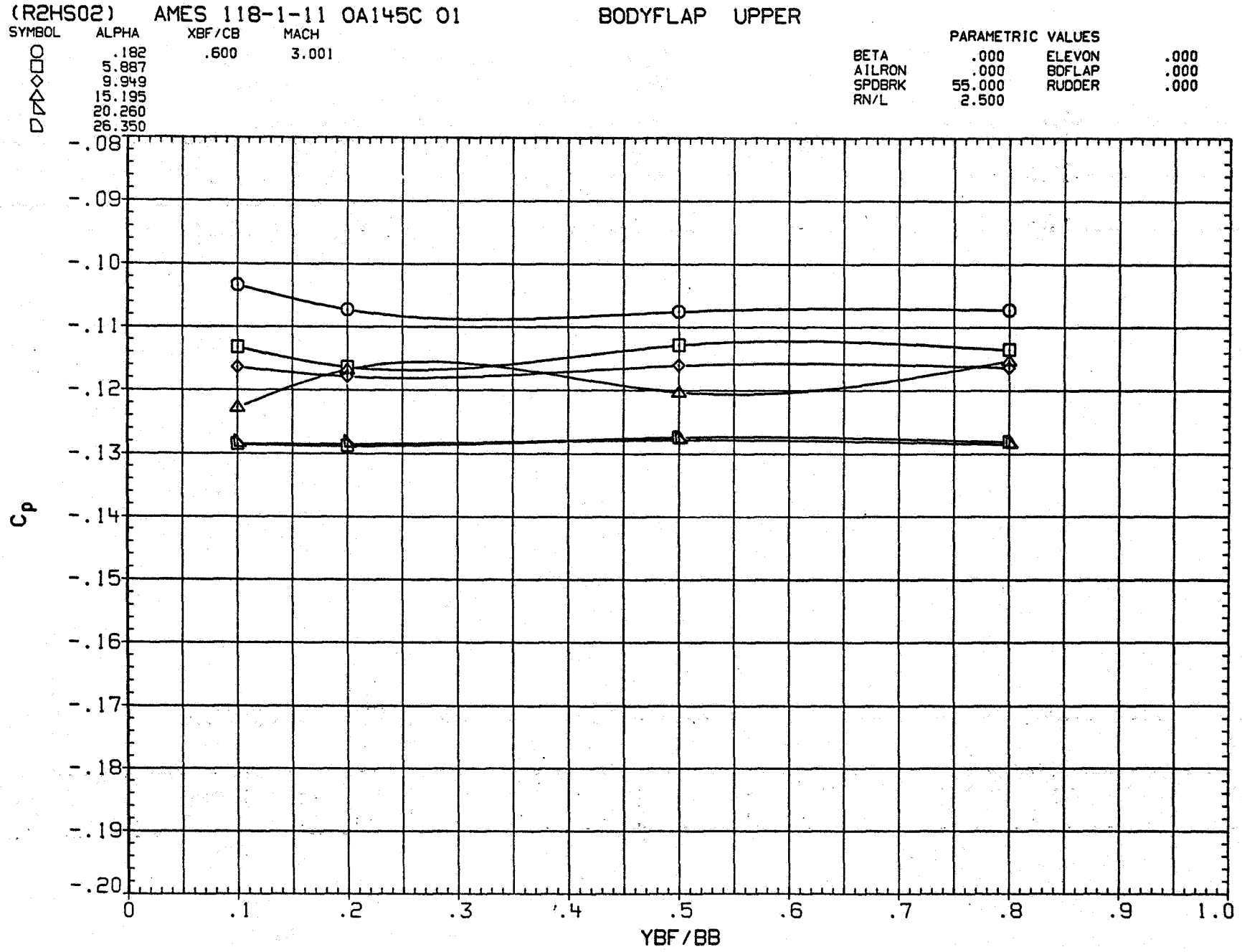


FIG. 113 0A145C BODY FLAP CP VS. YBF/BB
UPPER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

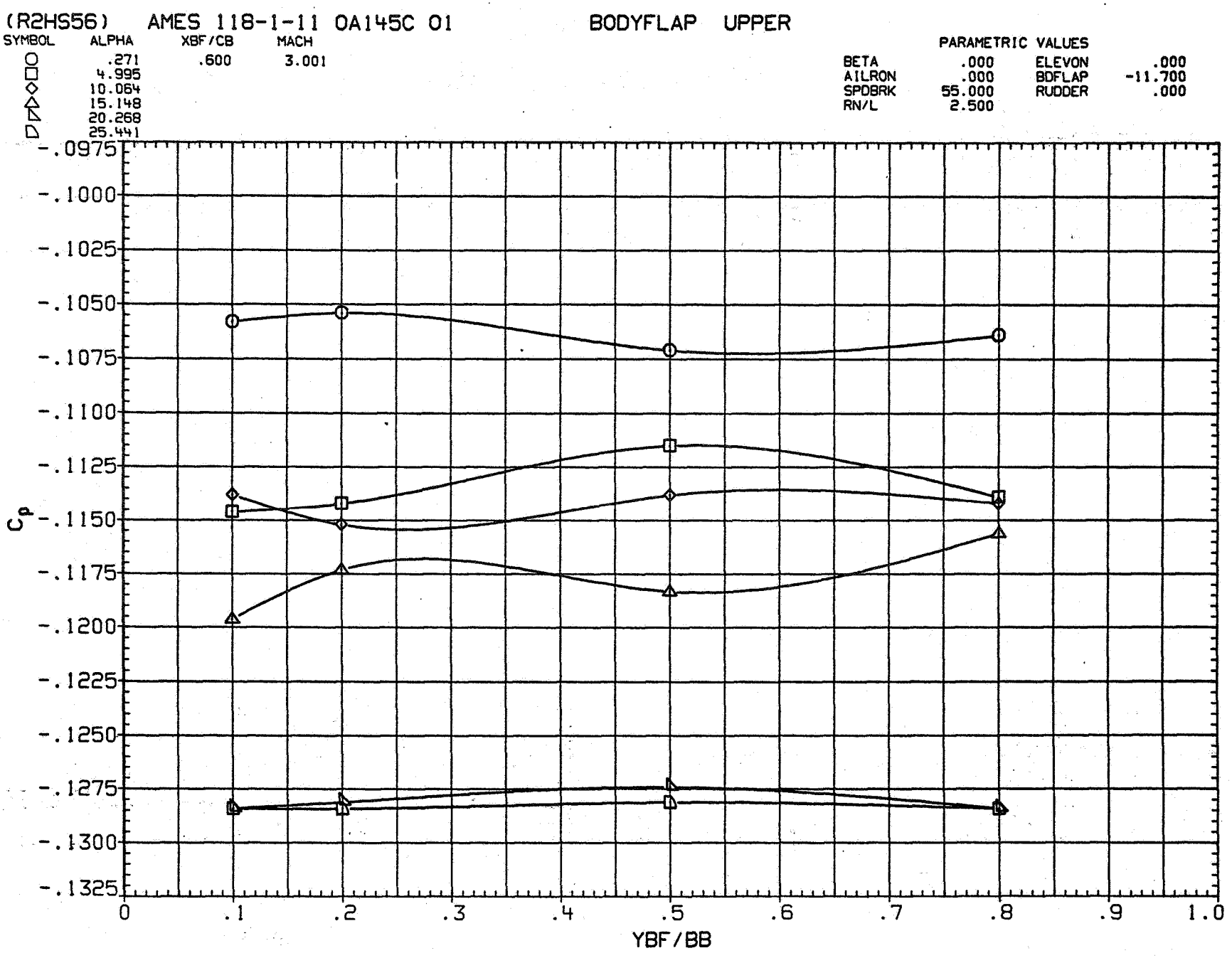


FIG. 114 OA145C BODY FLAP CP VS. YBF/BB
UPPER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

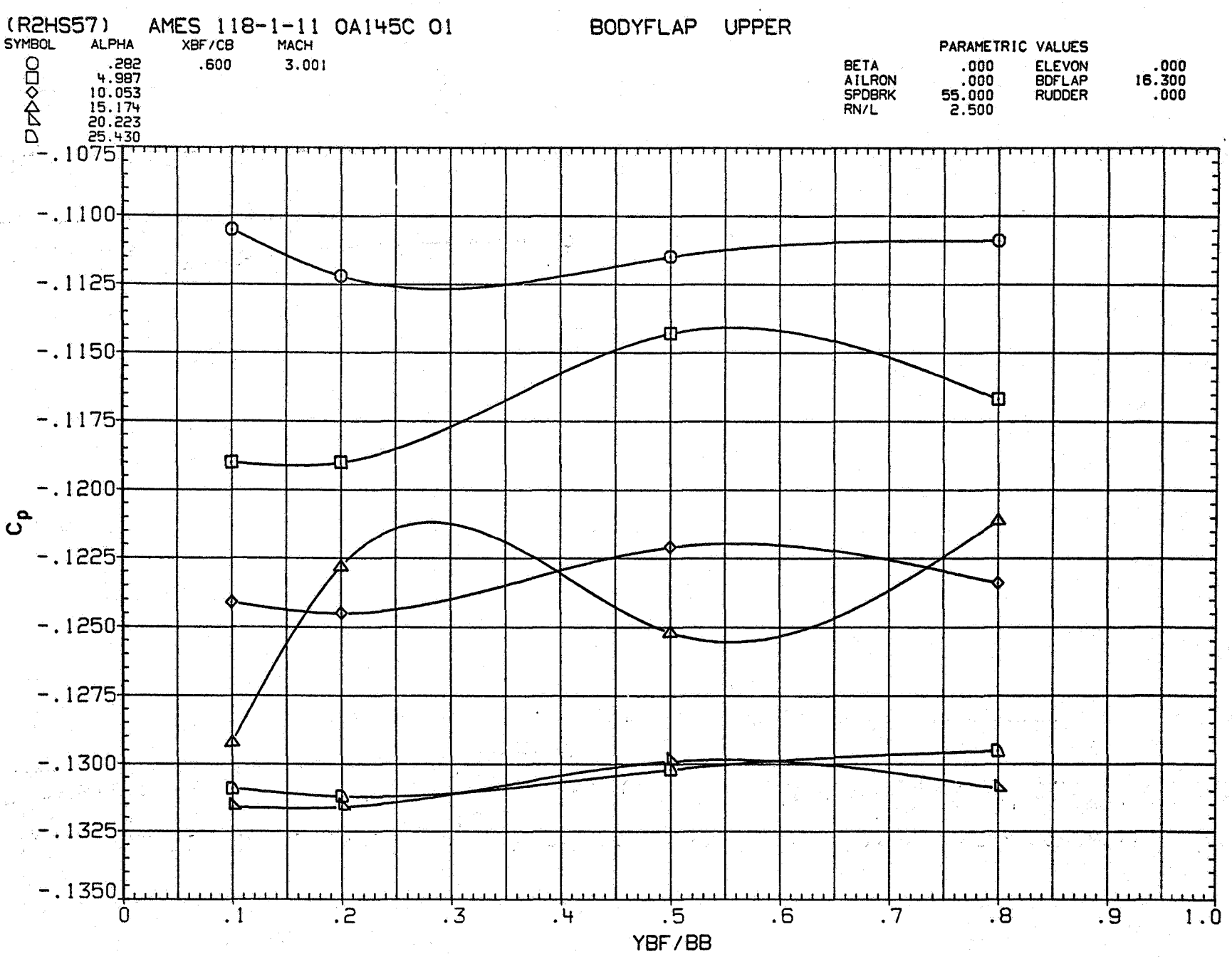


FIG. 115 0A145C BODY FLAP CP VS. YBF/BB
UPPER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

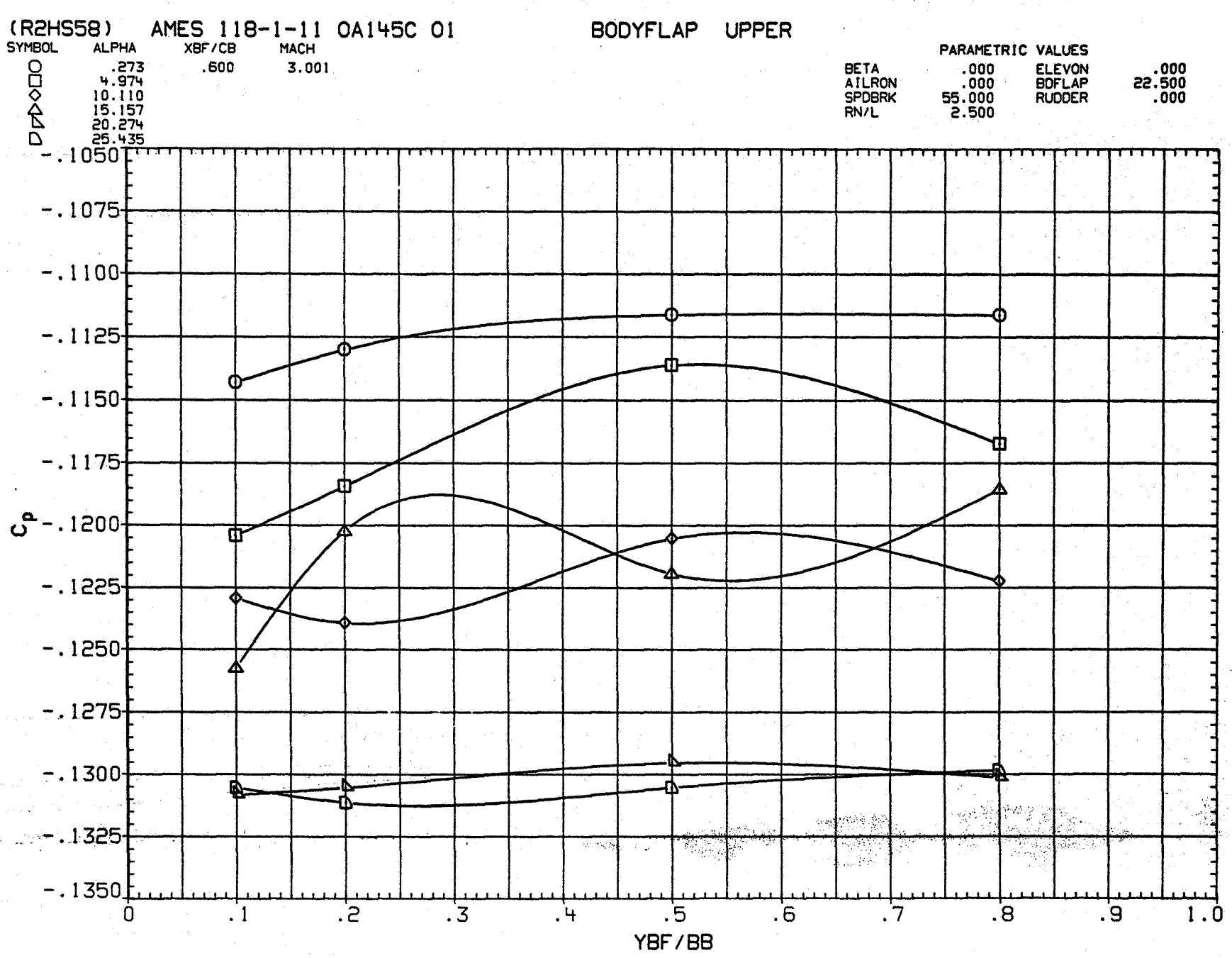


FIG. 116 OA145C BODY FLAP CP VS. YBF/BB
UPPER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HS59) AMES 118-1-11 OA145C 01 BODYFLAP UPPER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	.600	3.001
□	.029		
◇	8.010		
△	16.339		
◁	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

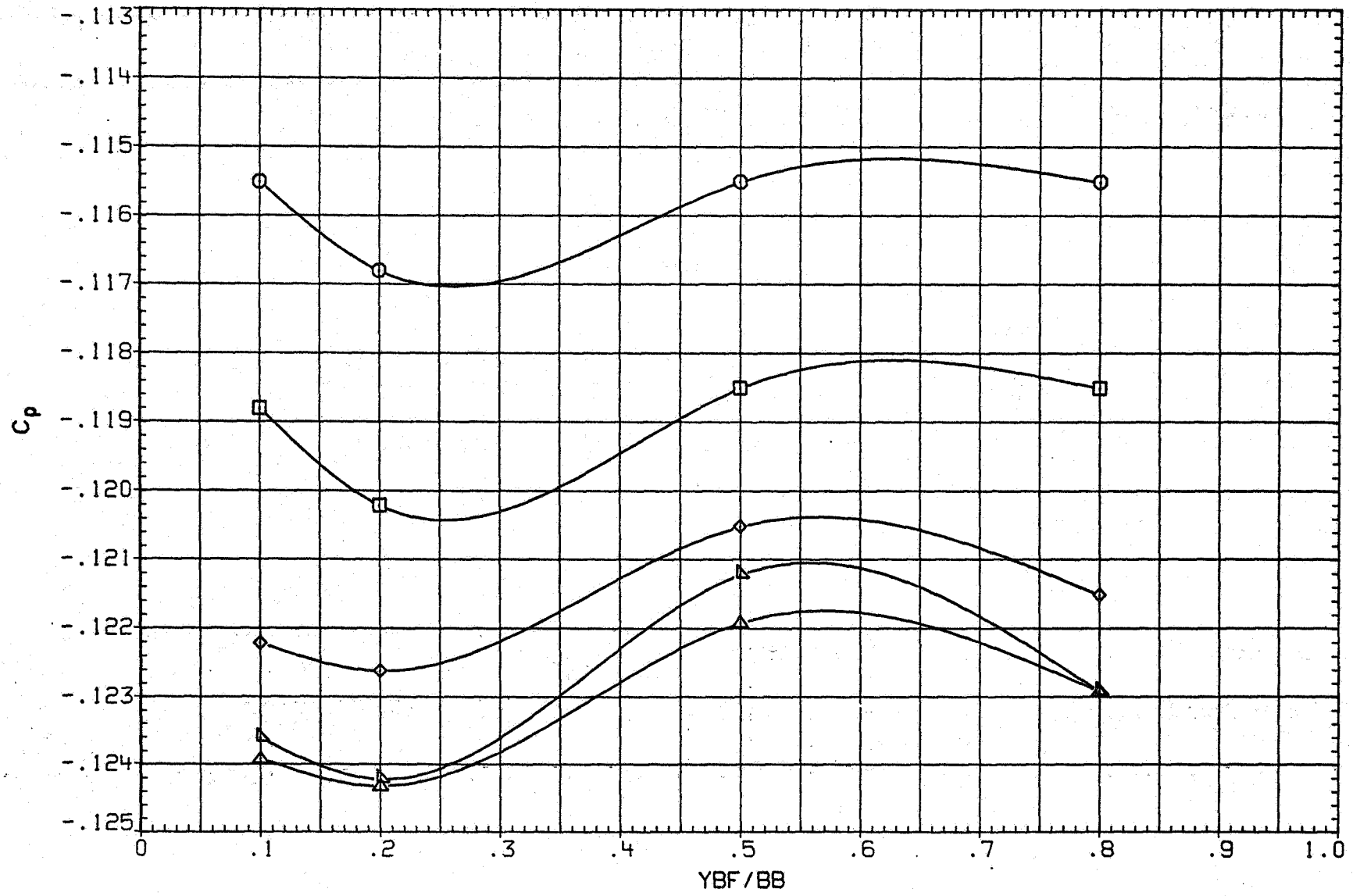


FIG. 117 OA145C BODY FLAP CP VS. YBF/BB
UPPER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

(R2HS60) AMES 118-1-11 OA145C 01 BODYFLAP UPPER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	.600	3.000
□	.019		
◇	7.990		
◁	16.339		
△	22.604		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

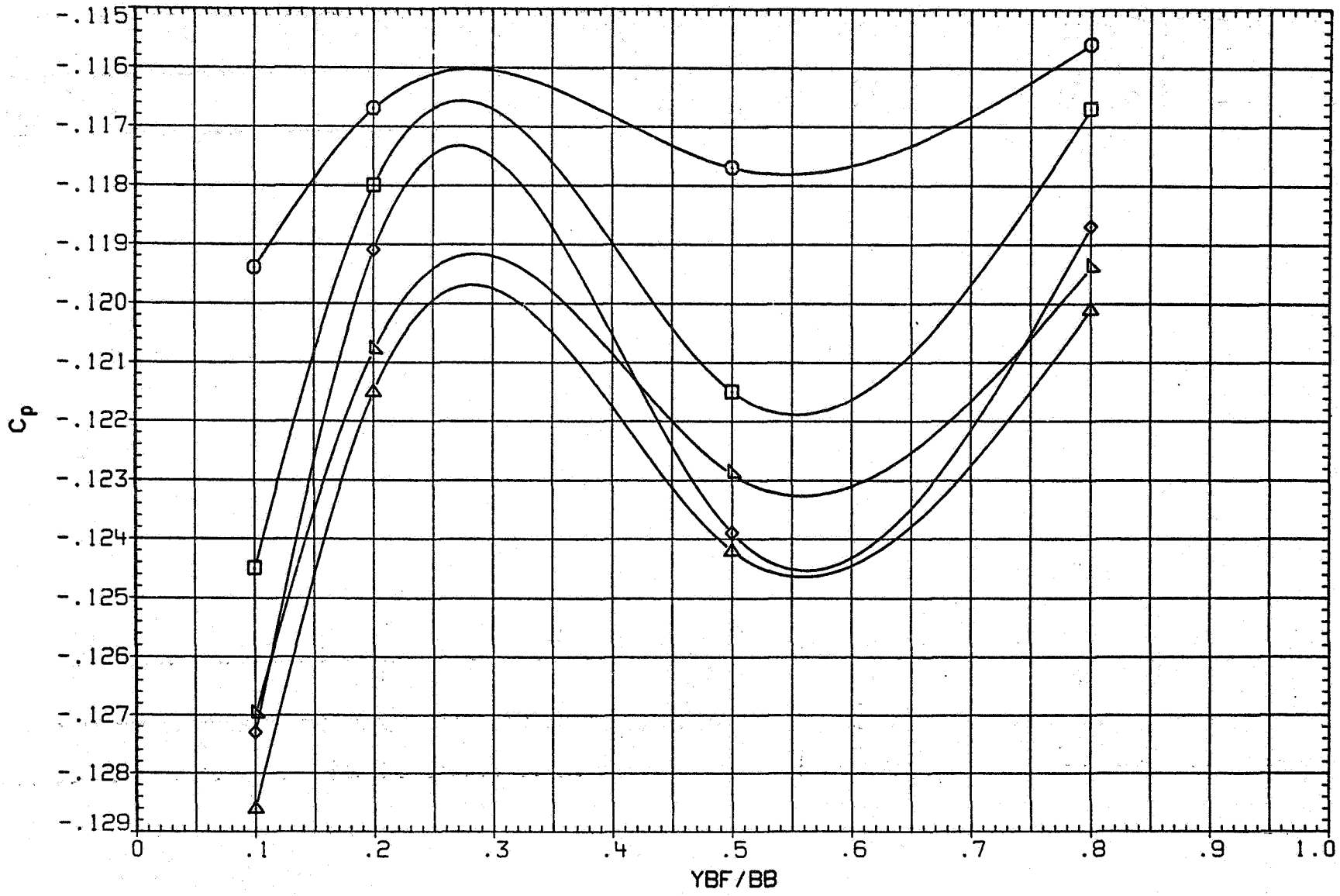


FIG. 118 OA145C BODY FLAP CP VS. YBF/BB
UPPER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

(R2HS61) AMES 118-1-11 OA145C 01 BODYFLAP UPPER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	.600	3.001
□	.019		
◇	8.020		
△	16.328		
◺	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

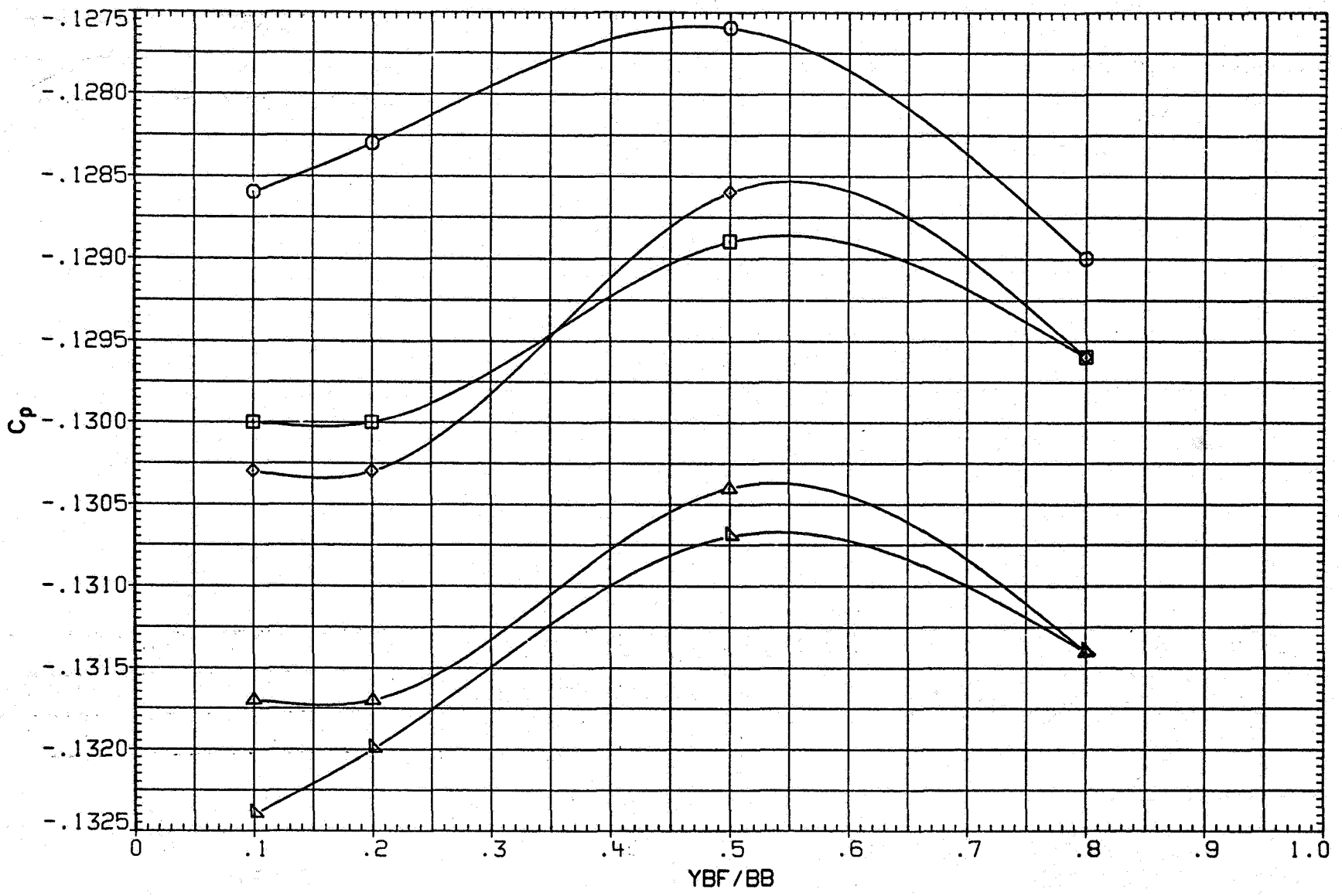


FIG. 119 OA145C BODY FLAP CP VS. YBF/BB
UPPER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

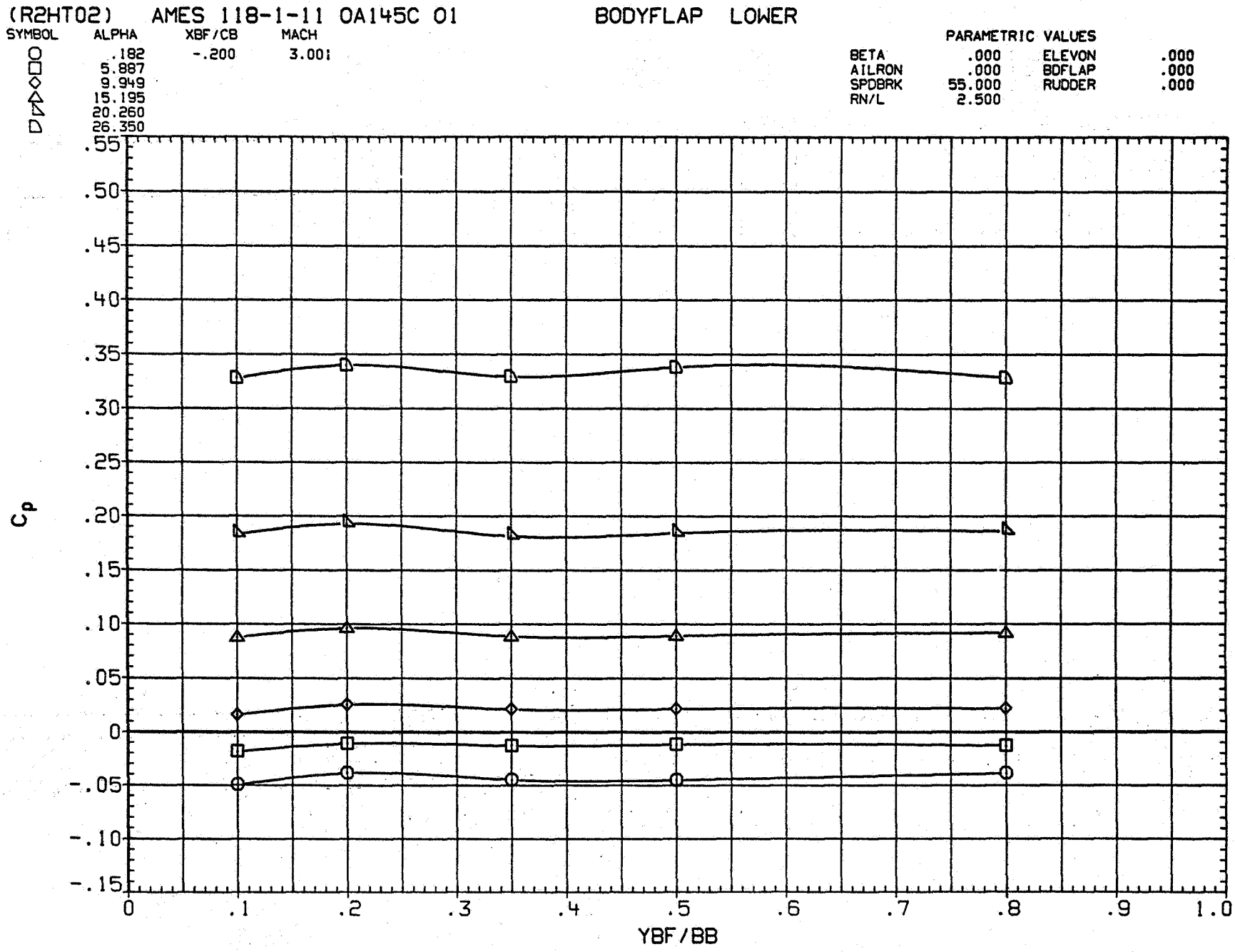


FIG. 120 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

(R2HT02) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.182	.200	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

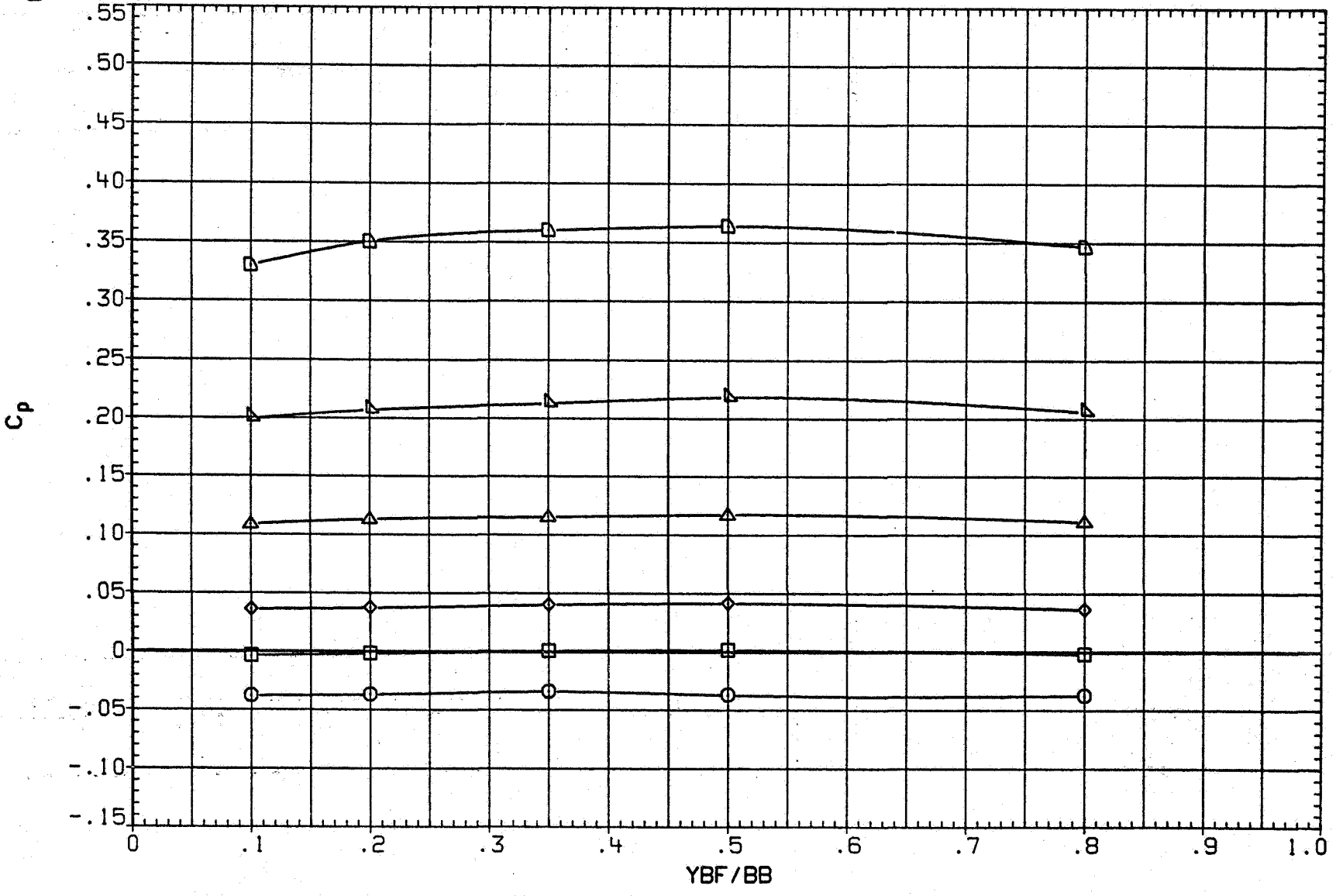


FIG. 120 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

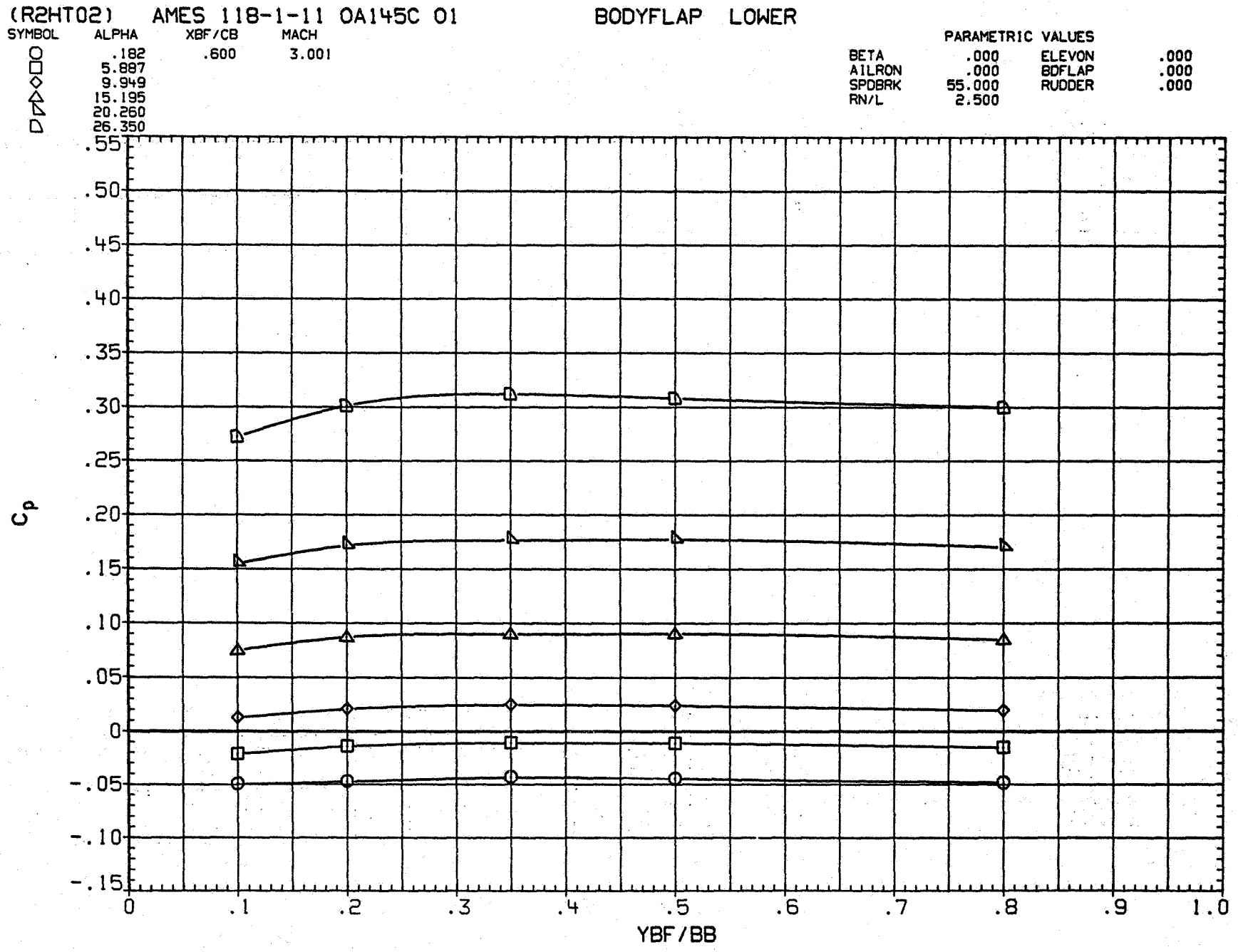


FIG. 120 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

(R2HT02) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.182	1.000	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

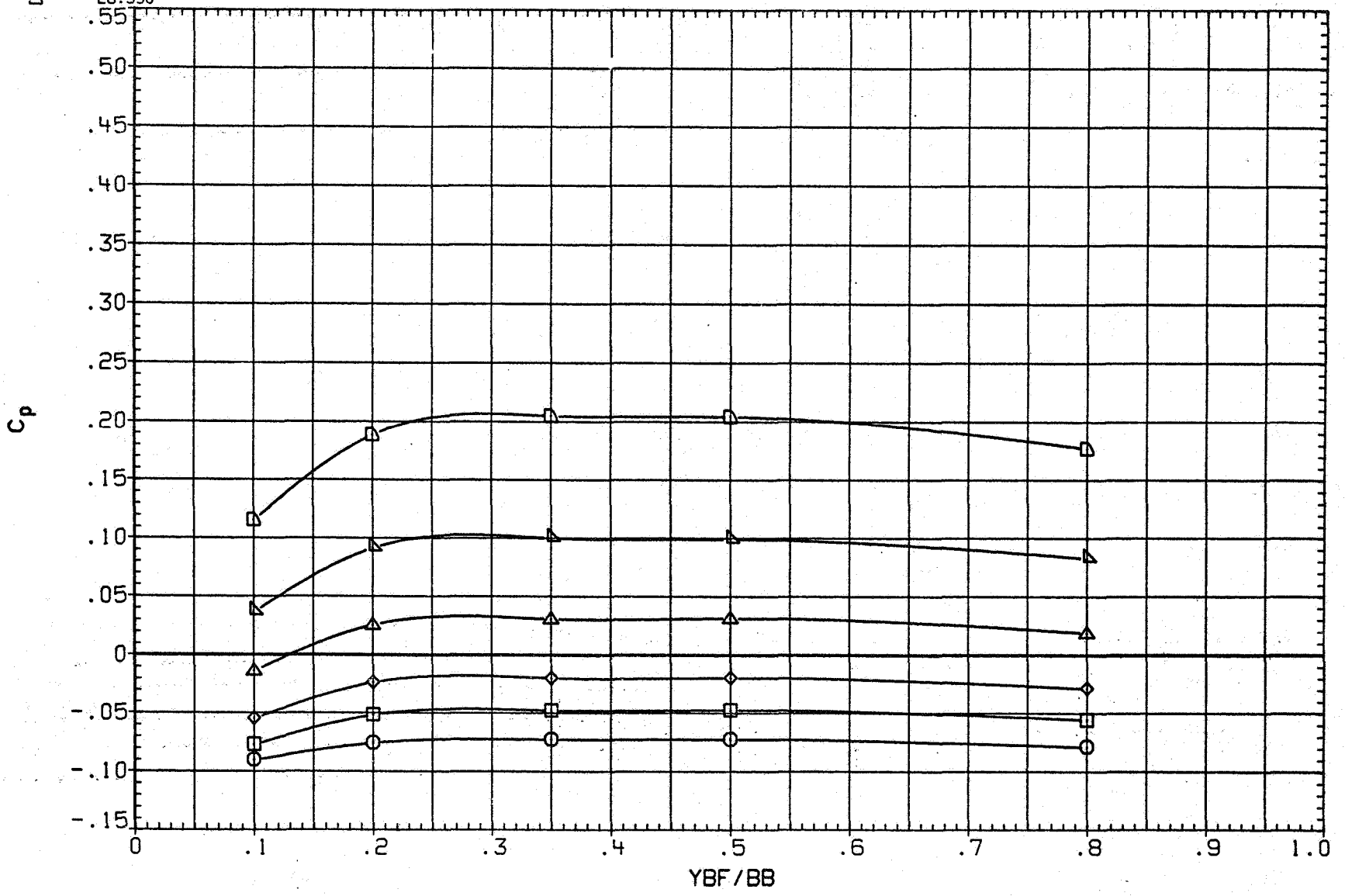


FIG. 120 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 0.0

(R2HT56) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.271	-.200	3.001
□	4.995		
◇	10.064		
△	15.148		
⊿	20.268		
▱	25.441		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	-11.700
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

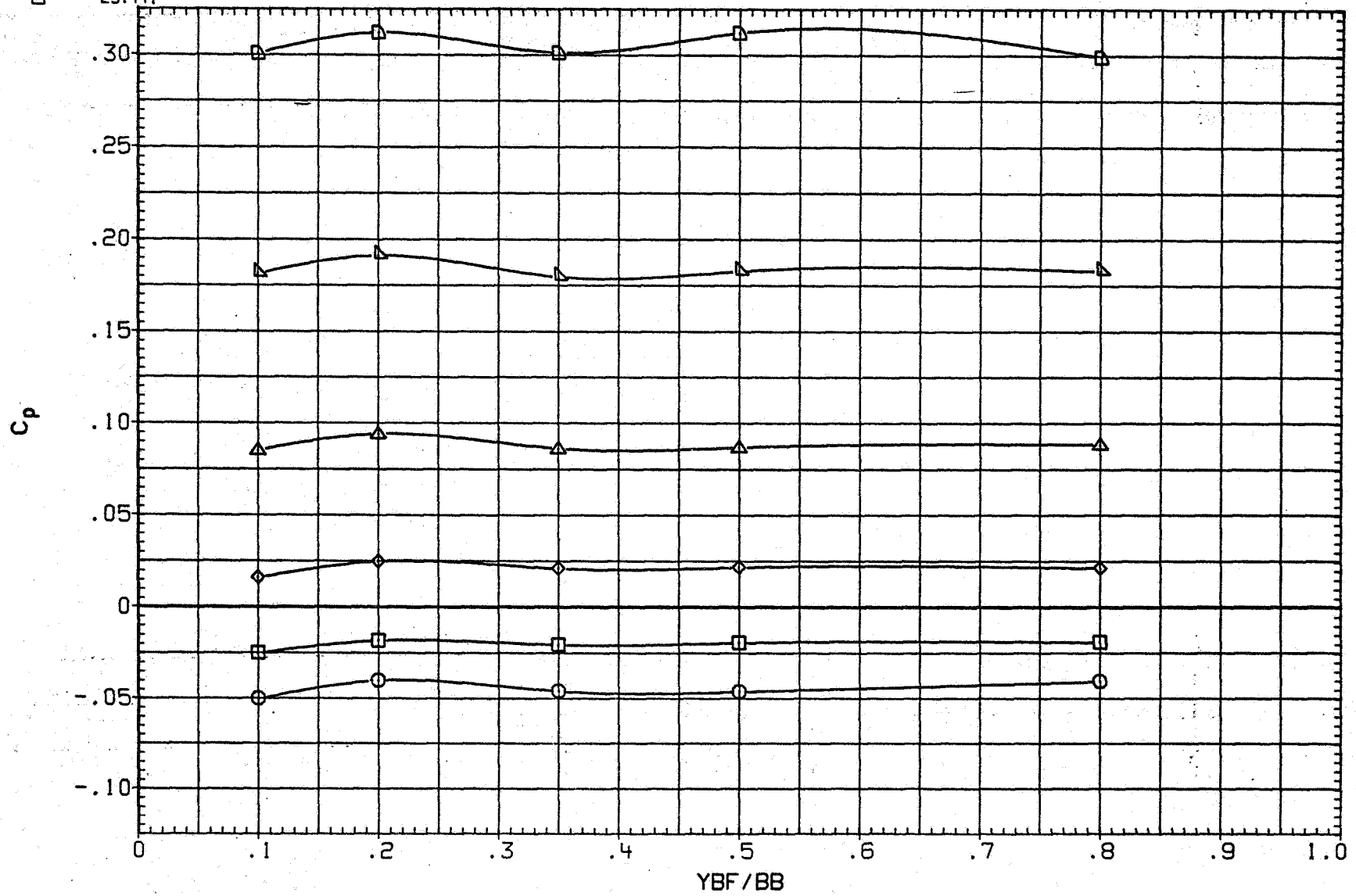


FIG. 121 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

(R2HT56) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.271	.200	3.001
□	4.995		
◇	10.064		
◁	15.148		
△	20.268		
▱	25.441		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	-11.700
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

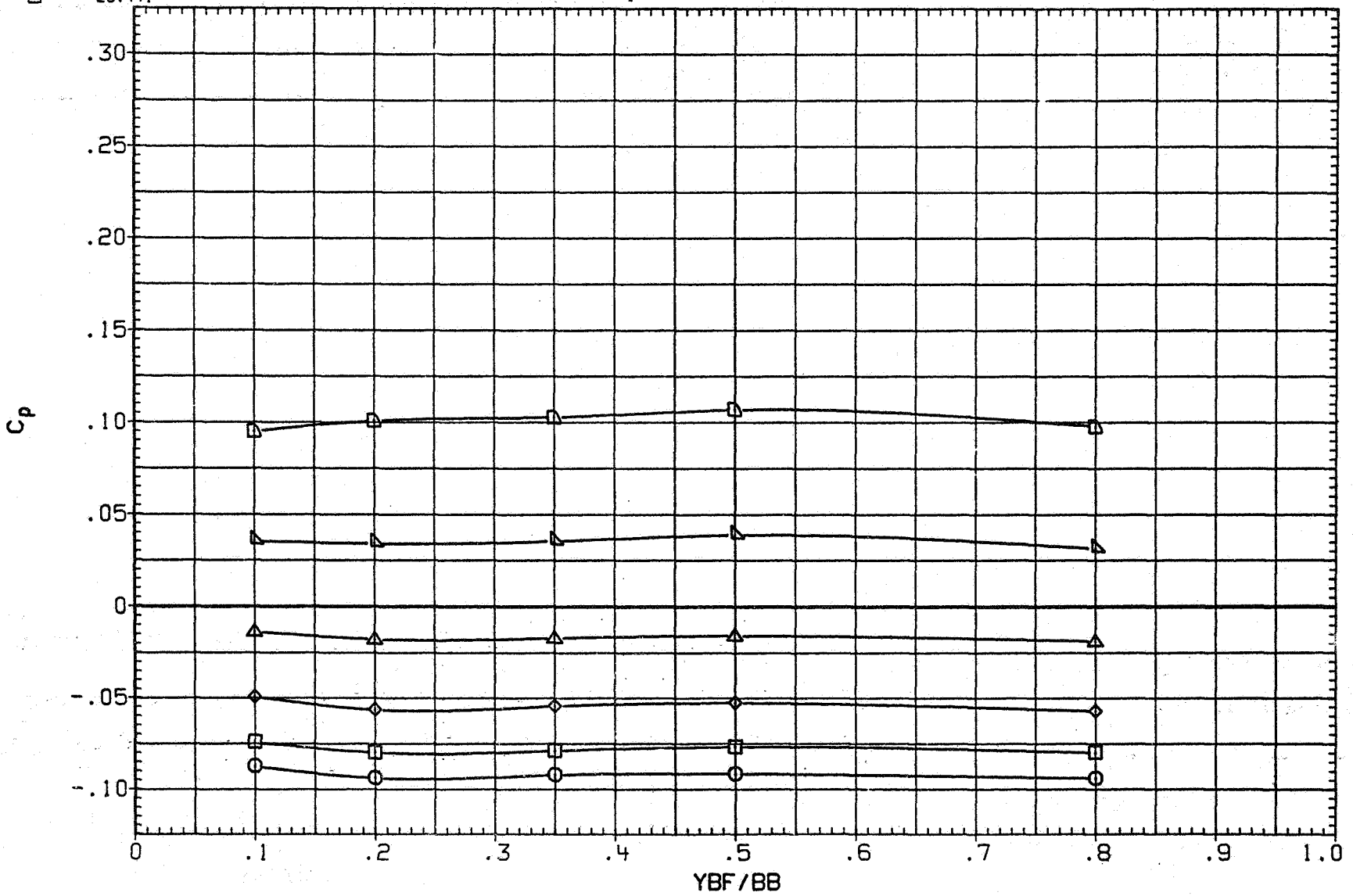


FIG. 121 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

(R2HT56) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.271	.600	3.001
□	4.995		
◇	10.064		
△	15.148		
◺	20.268		
⏢	25.441		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	-11.700
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

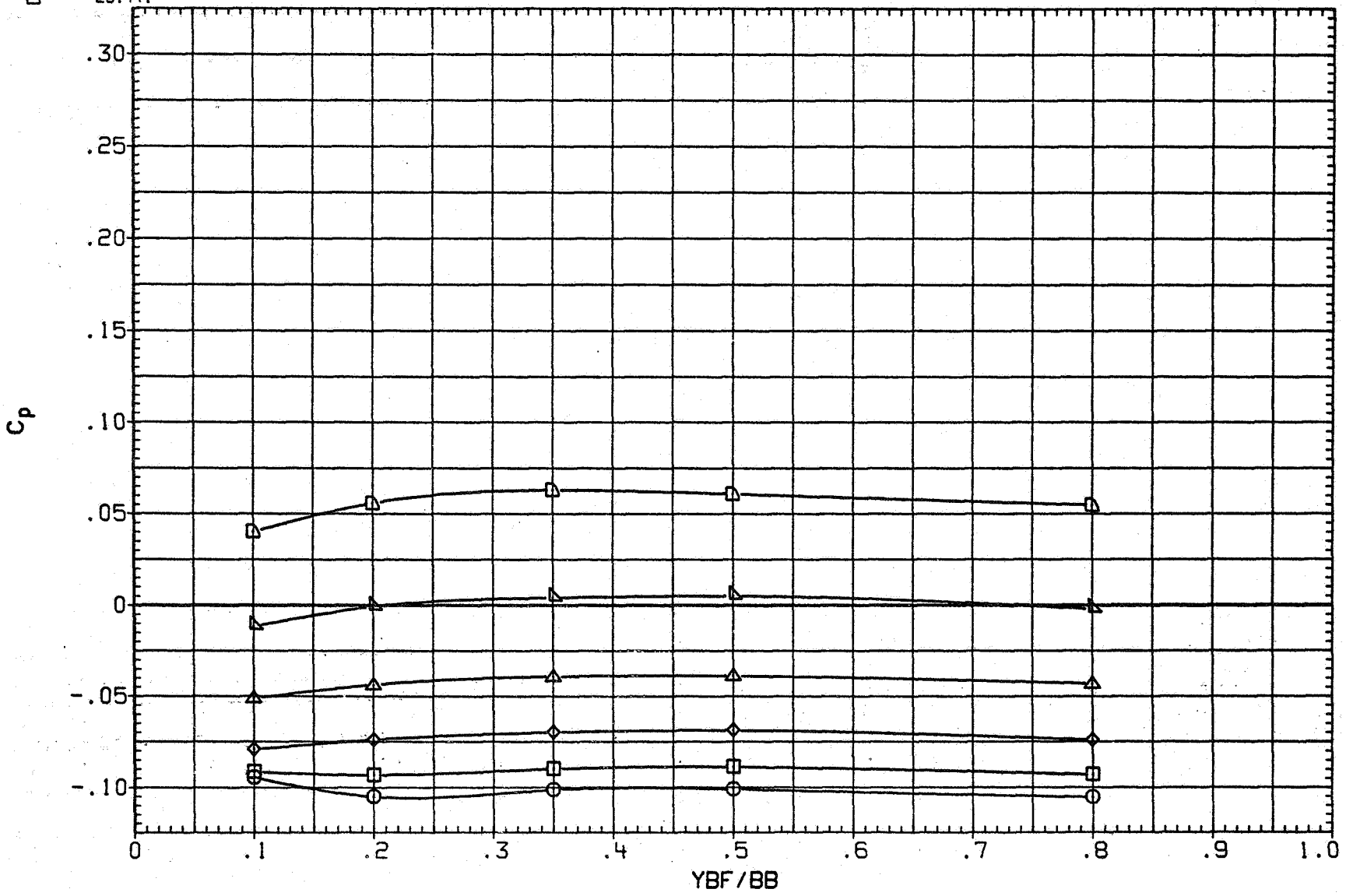


FIG. 121 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

(R2HT56) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.271	1.000	3.001
□	4.995		
◇	10.064		
△	15.148		
◁	20.268		
D	25.441		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	-11.700
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

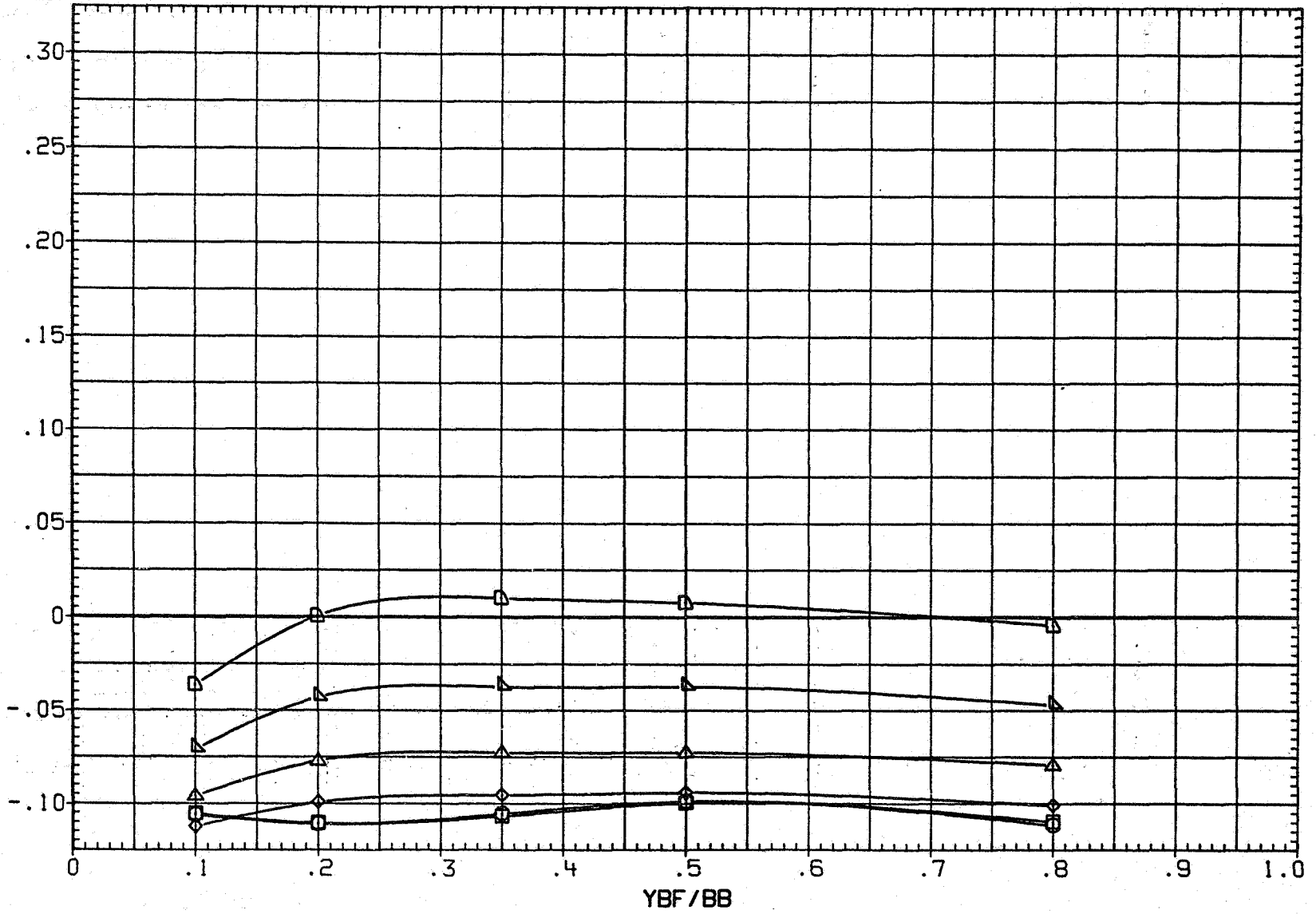


FIG. 121 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = -11.7

(R2HT57) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.282	-.200	3.001
□	4.987		
◇	10.053		
△	15.174		
◁	20.223		
▷	25.430		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	16.300
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

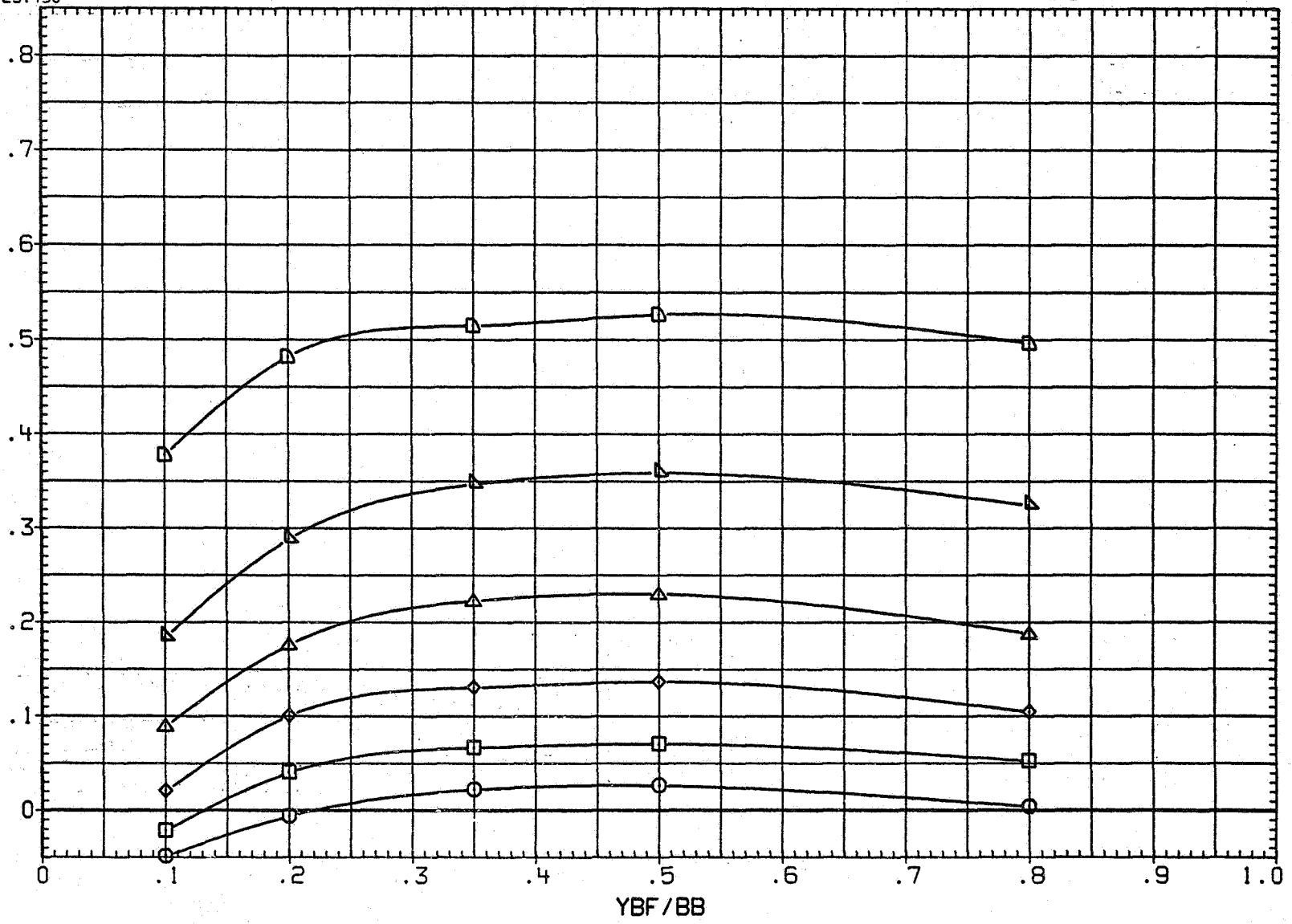


FIG. 122 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

(R2HT57) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.282	.200	3.001
□	4.987		
◇	10.053		
△	15.174		
◺	20.223		
D	25.430		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	16.300
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

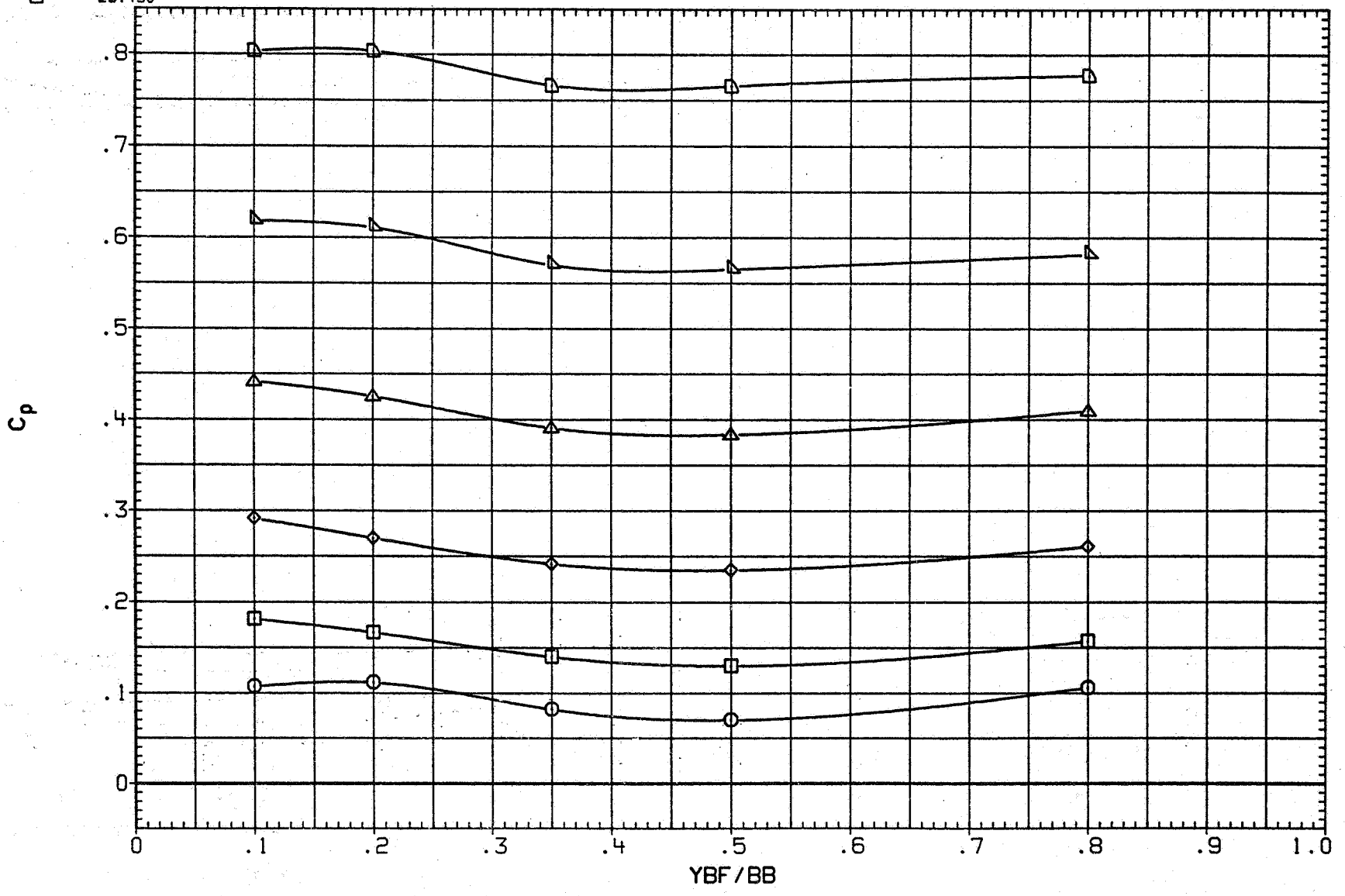


FIG. 122 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

(R2HT57) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.282	.600	3.001
□	4.987		
◇	10.053		
△	15.174		
◁	20.223		
▷	25.430		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	16.300
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

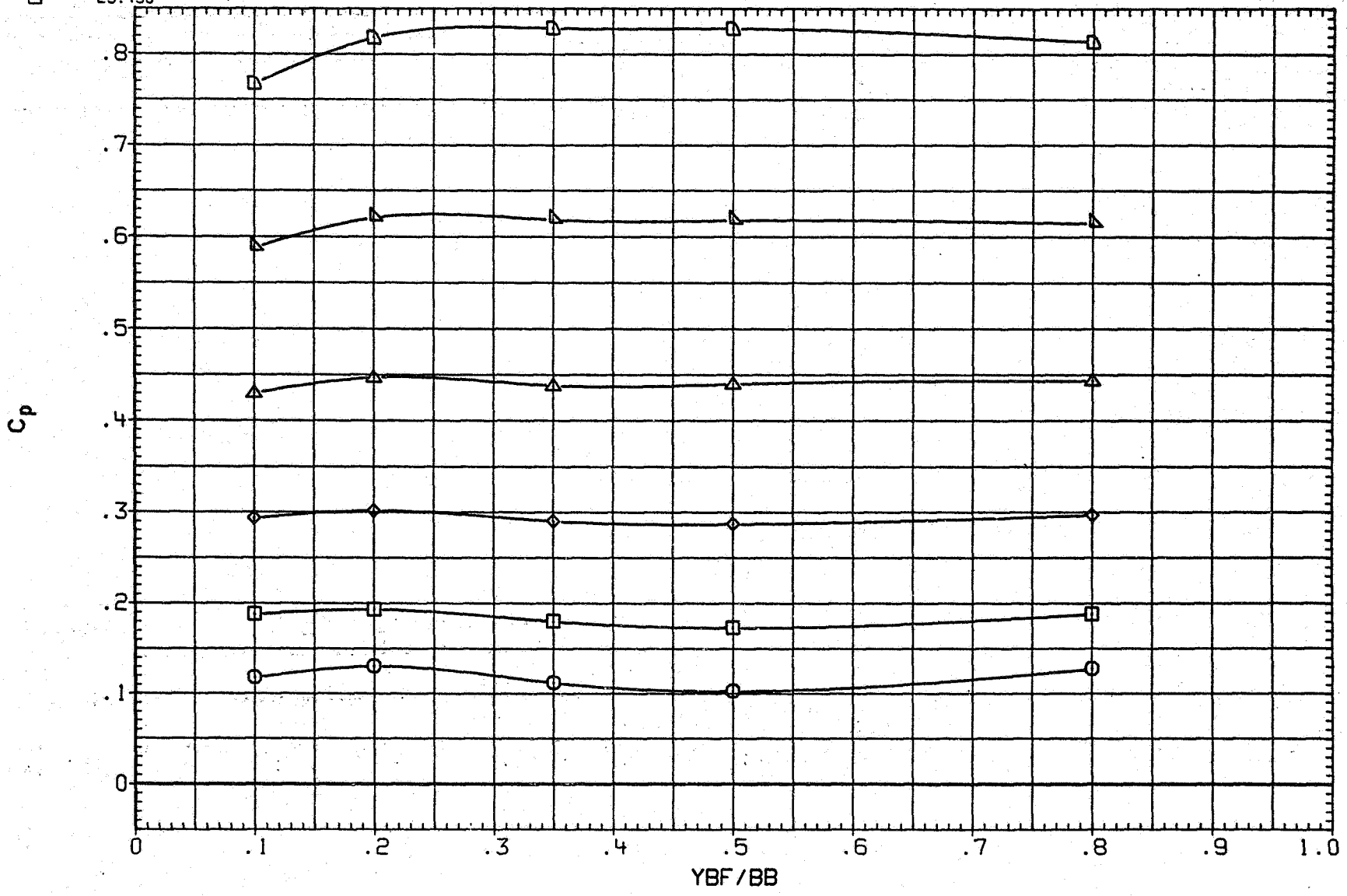


FIG. 122 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

(R2HT57) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.282	1.000	3.001
□	4.987		
◇	10.053		
△	15.174		
◁	20.223		
D	25.430		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	16.300
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

FIG. 122 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 16.3

(R2HT58) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.273	-.200	3.001
□	4.974		
◇	10.110		
△	15.157		
◁	20.274		
D	25.435		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	22.500
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

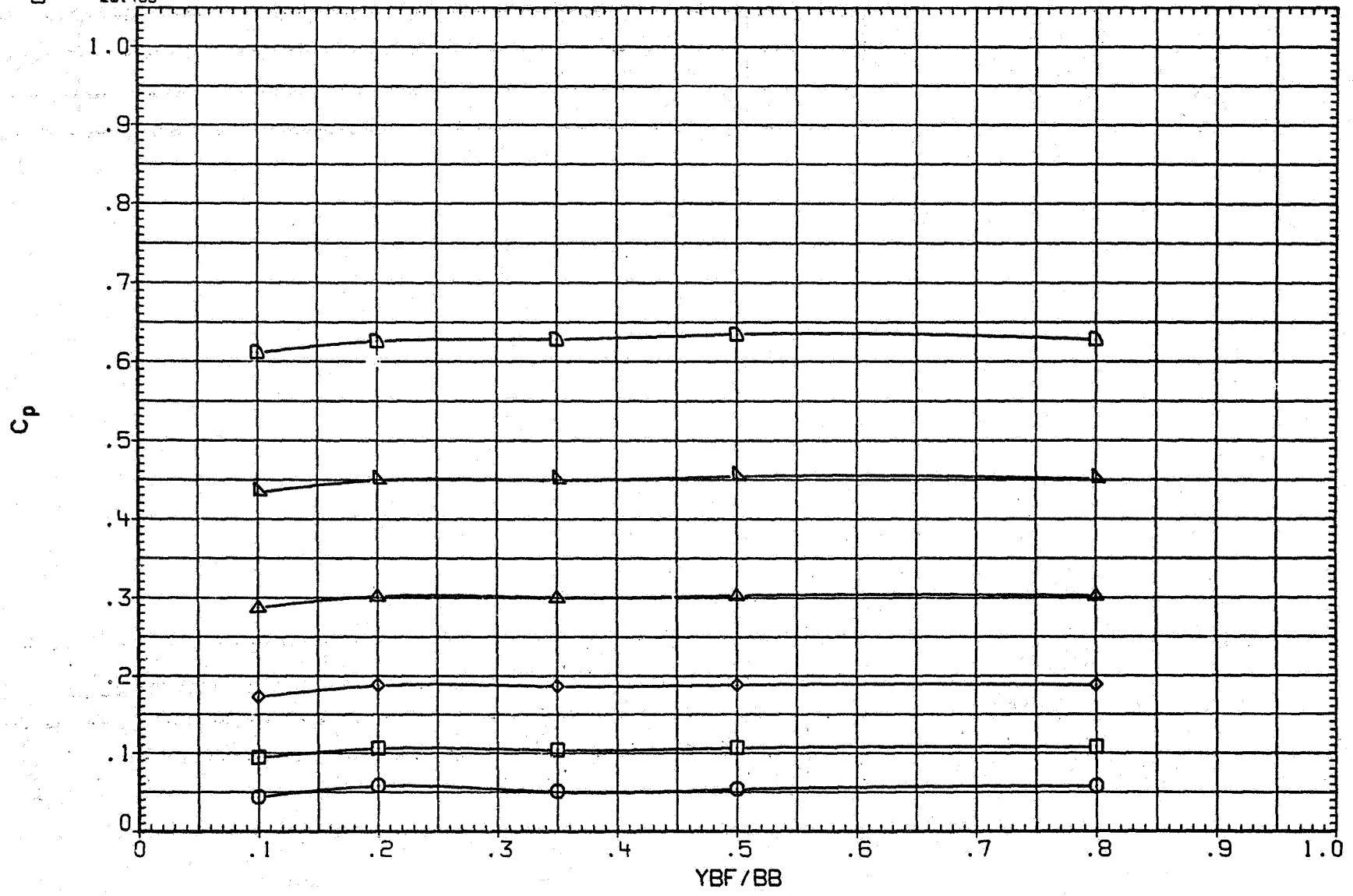


FIG. 123 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HT58) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.273	.200	3.001
□	4.974		
◇	10.110		
△	15.157		
◁	20.274		
▷	25.435		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	22.500
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

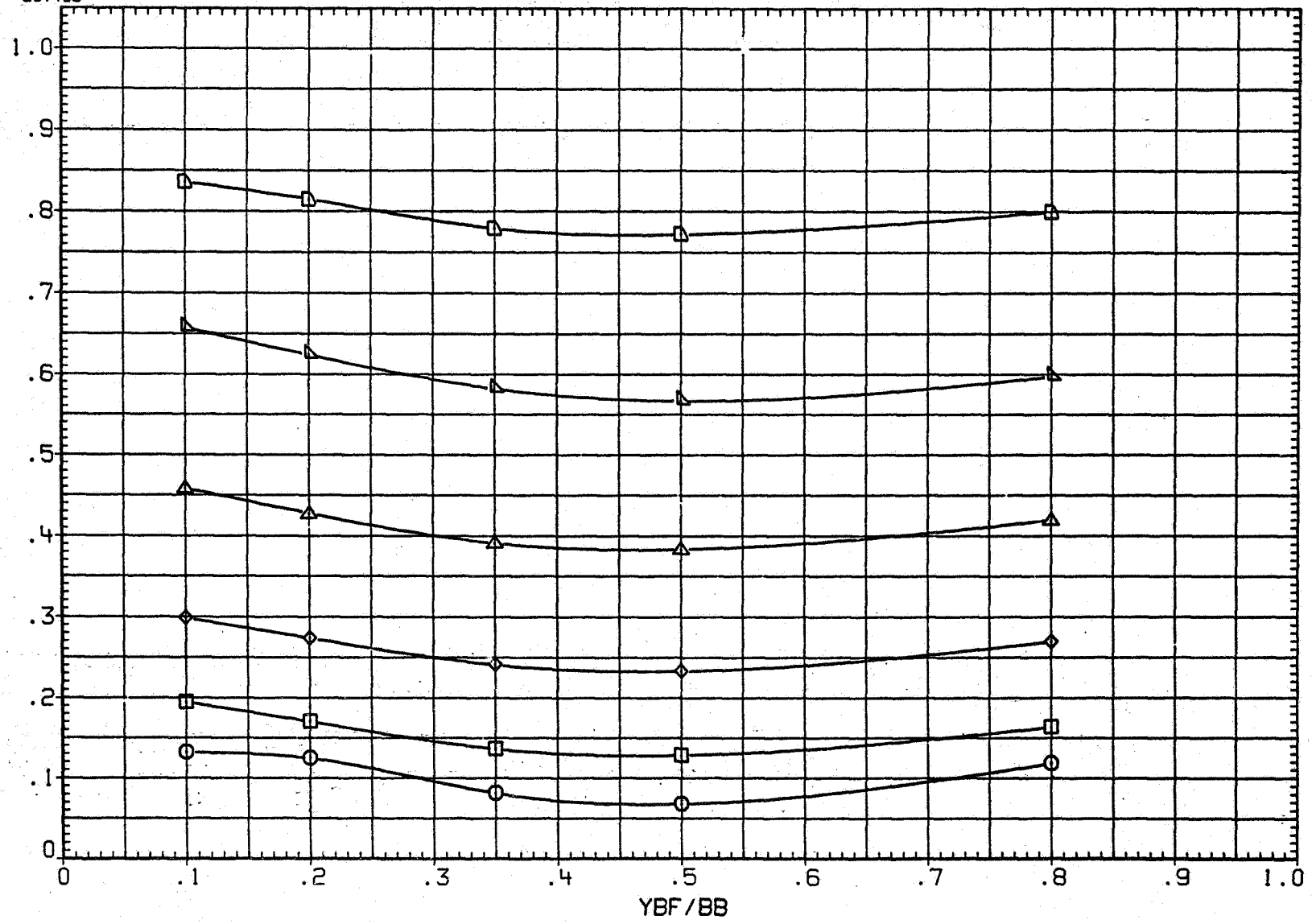


FIG. 123 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HT58) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.273	.600	3.001
□	4.974		
◇	10.110		
△	15.157		
◸	20.274		
▱	25.435		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	22.500
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

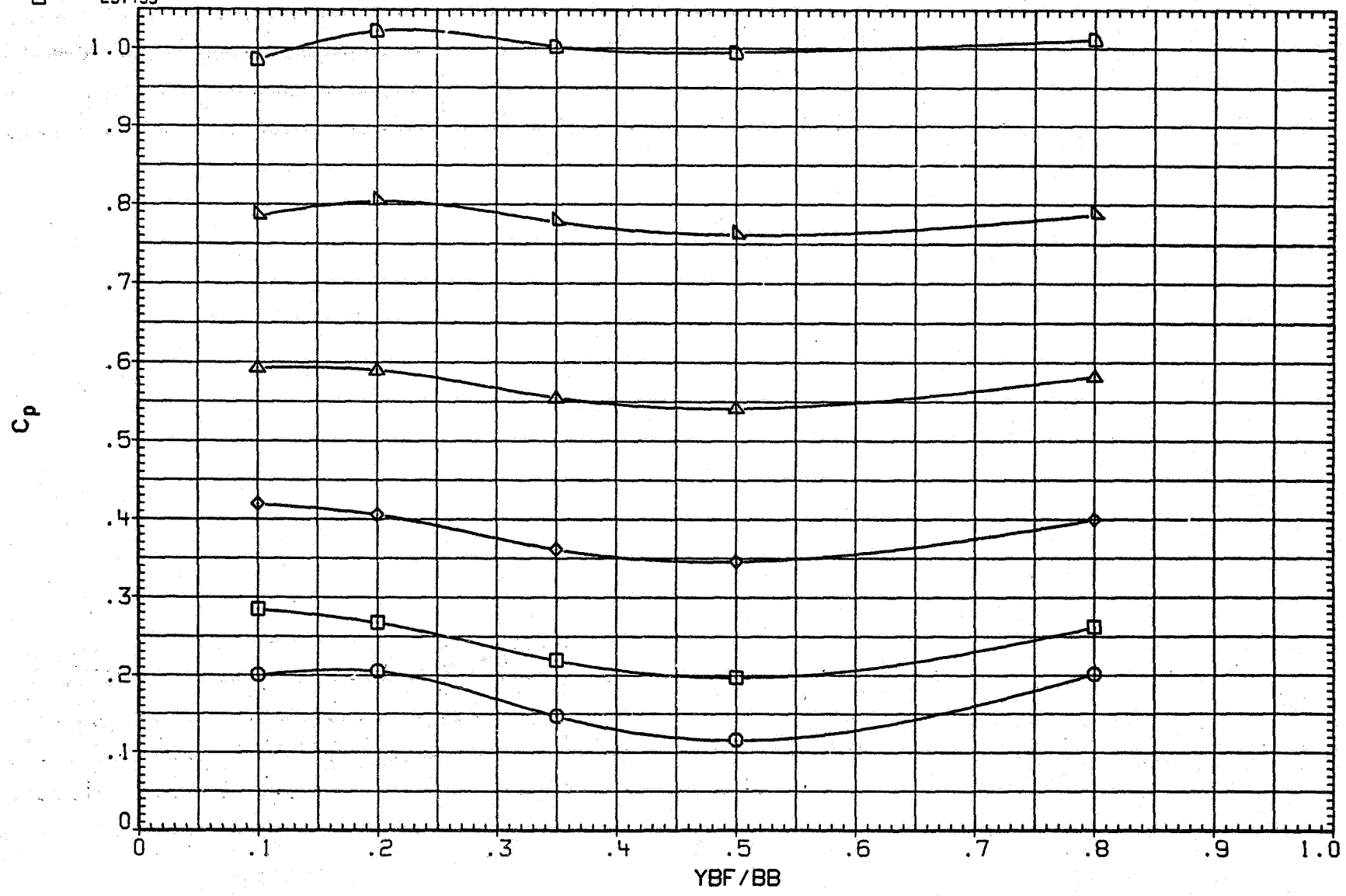


FIG. 123 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HT58) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	ALPHA	XBF/CB	MACH
○	.273	1.000	3.001
□	4.974		
◇	10.110		
△	15.157		
▽	20.274		
▷	25.435		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	22.500
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

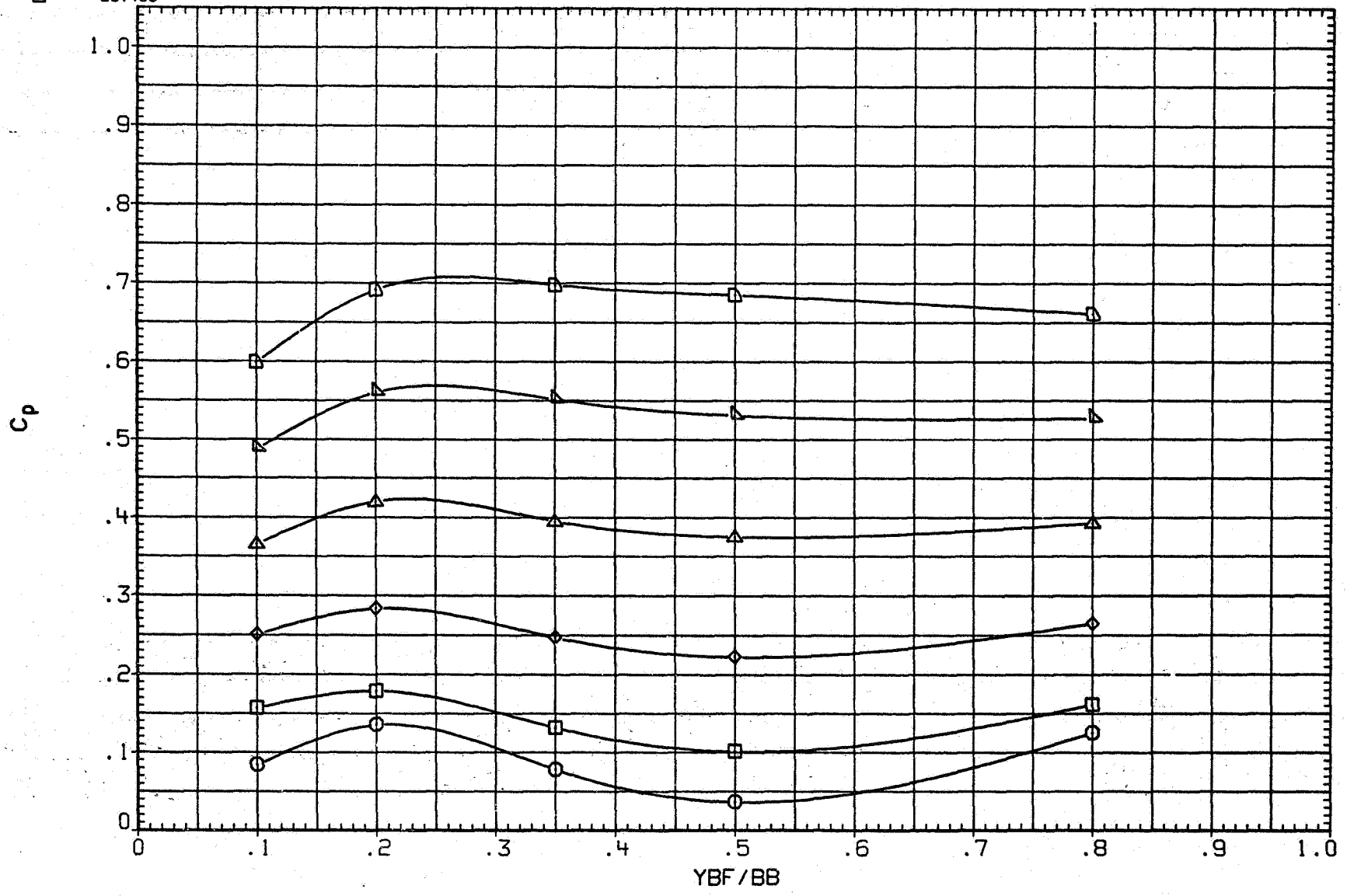


FIG. 123 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, ALPHA EFFECT AT BDFLAP = 22.5

(R2HT59) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	-.200	3.001
□	.029		
◇	8.010		
△	16.339		
◁	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

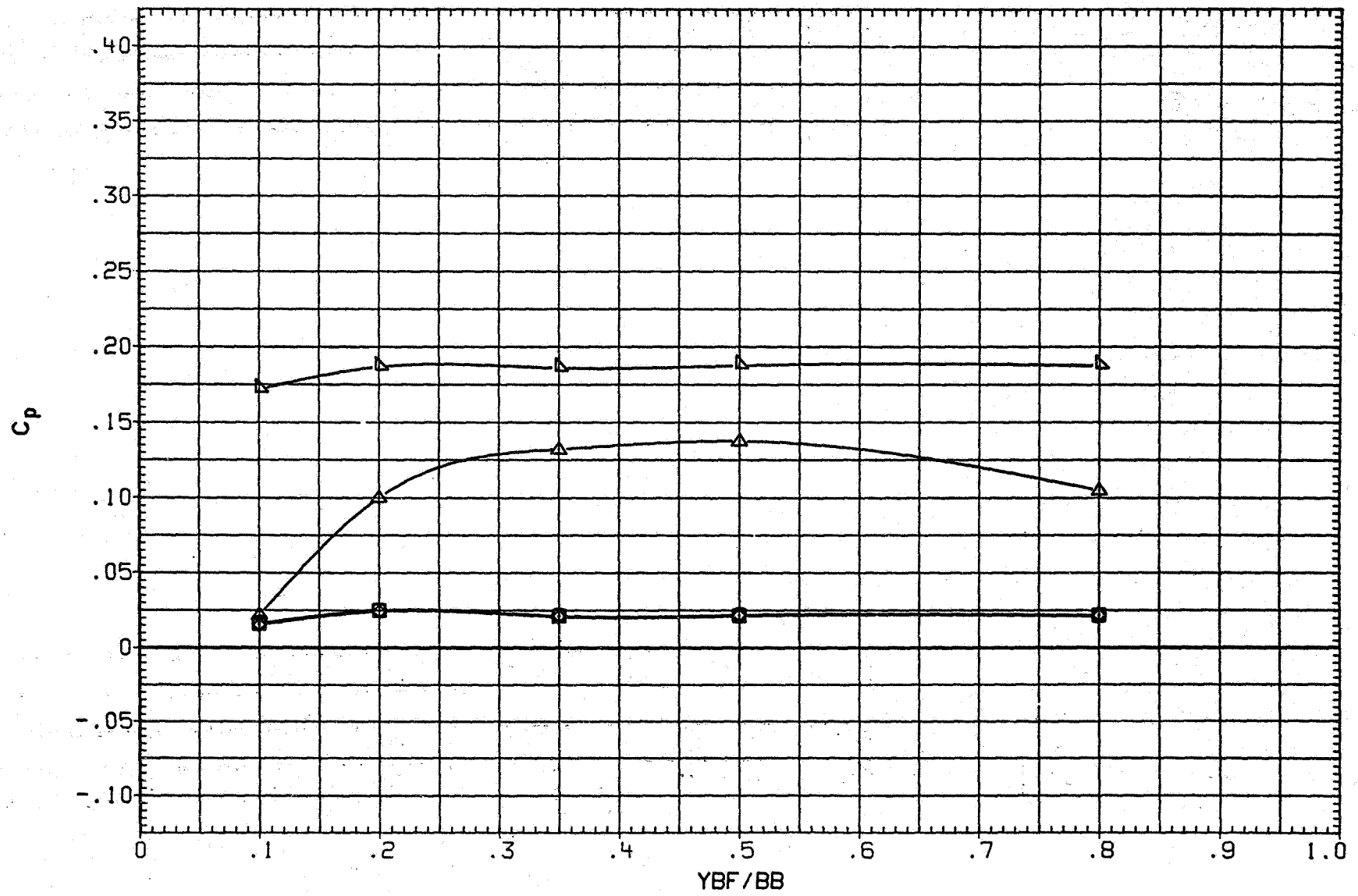


FIG. 124 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

(R2HT59) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	.200	3.001
□	.029		
◇	8.010		
◁	16.339		
△	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

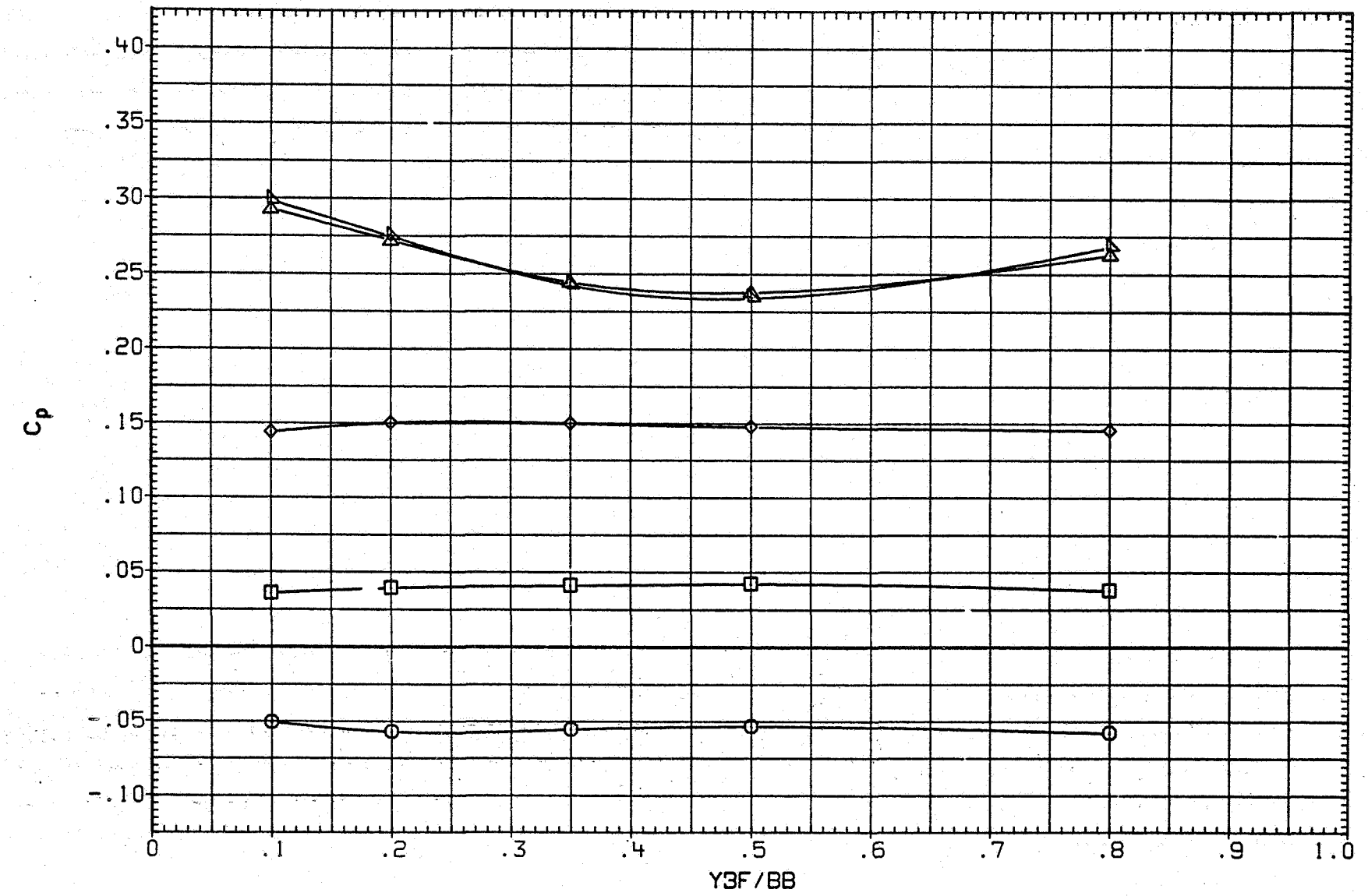


FIG. 124 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

(R2HT59) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	.600	3.001
□	.029		
◇	8.010		
◁	16.339		
◁	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

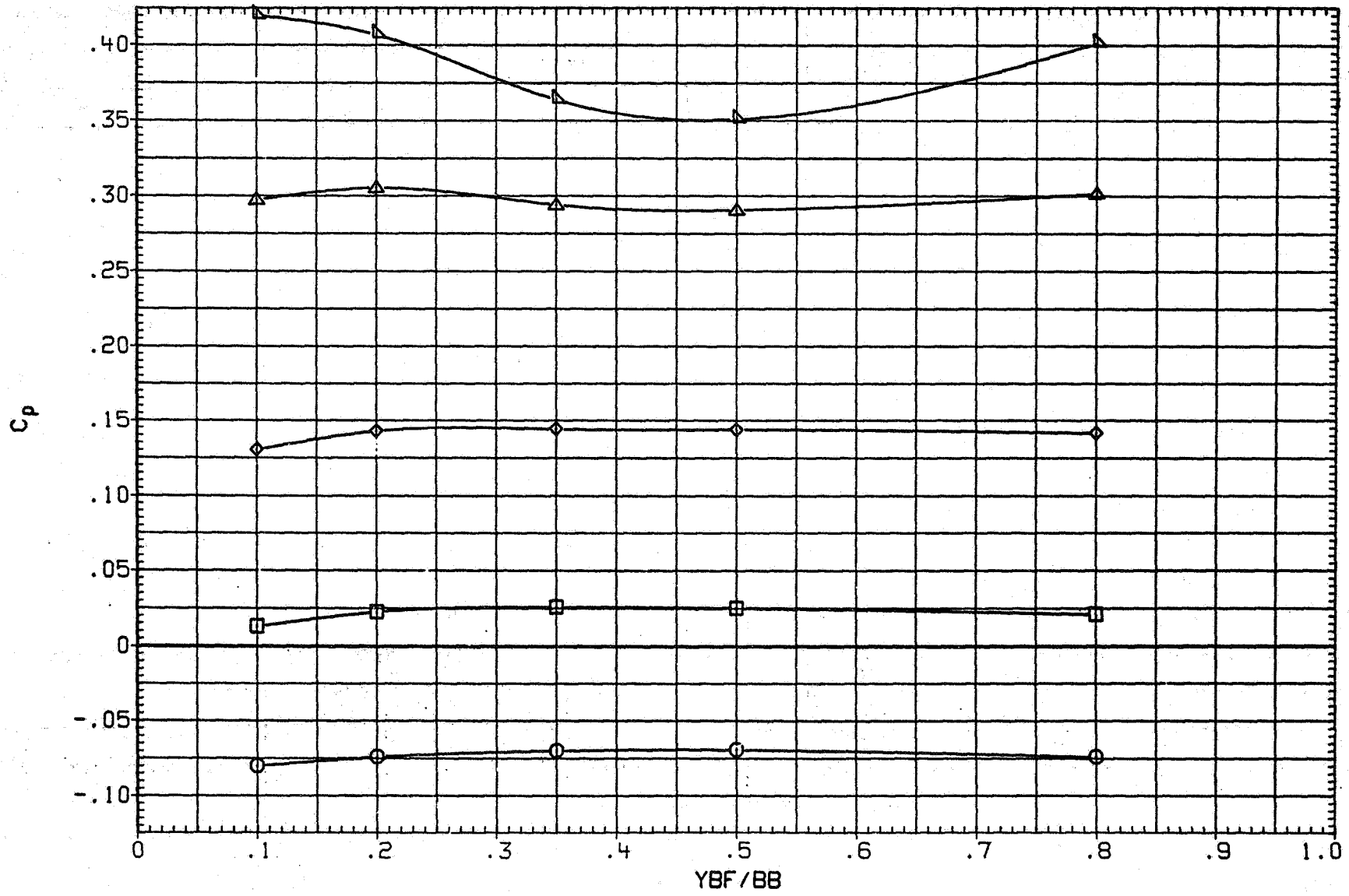


FIG. 124 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

(R2HT59) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	1.000	3.001
□	.029		
◇	8.010		
△	16.339		
◁	22.594		

PARAMETRIC VALUES

ALPHA	10.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

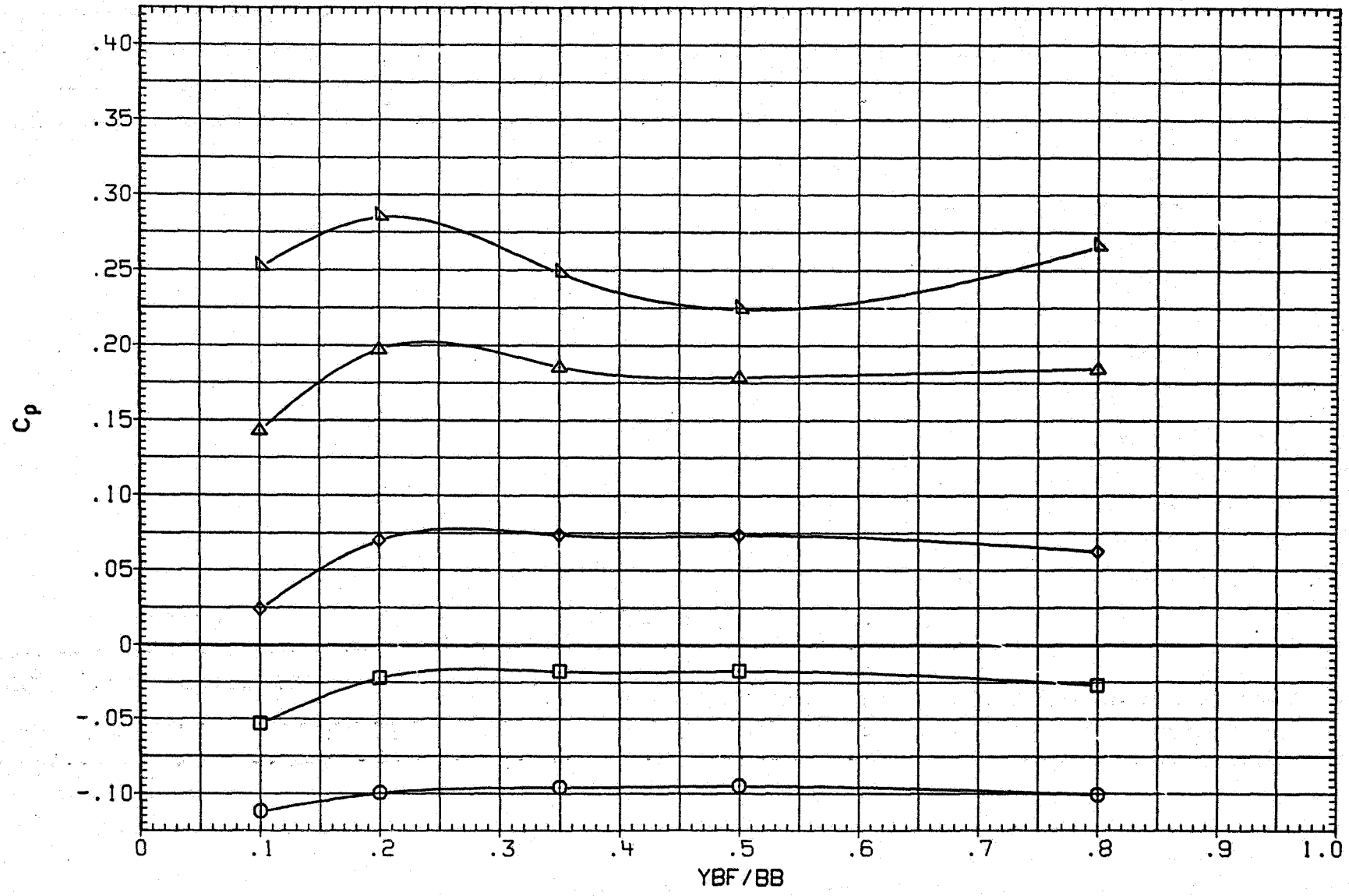


FIG. 124 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 10.0

(R2HT60) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	-.200	3.000
□	.019		
◇	7.990		
△	16.339		
◺	22.604		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

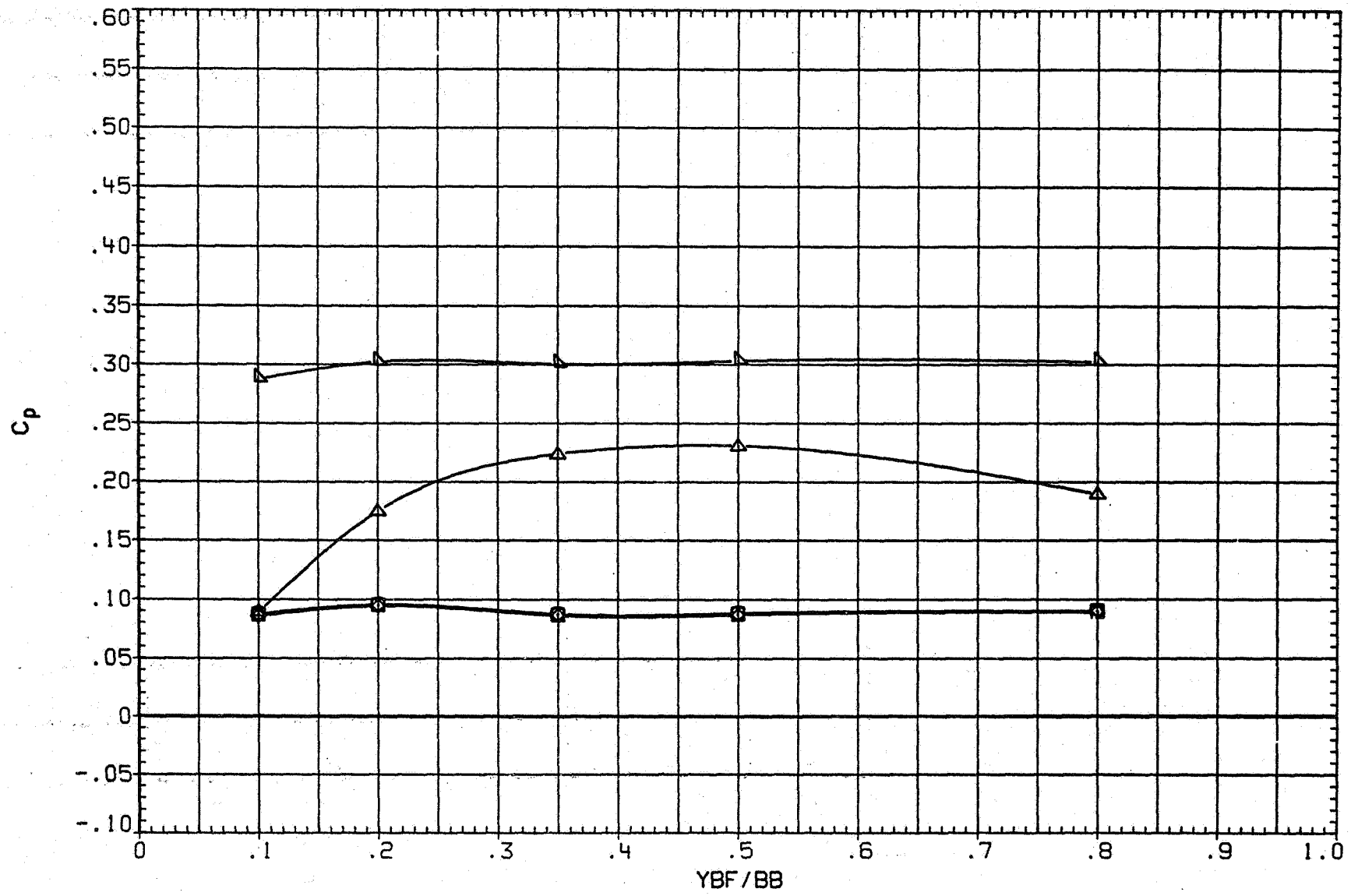


FIG. 125 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

(R2HT60) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	.200	3.000
□	.019		
◇	7.990		
△	16.339		
◁	22.604		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

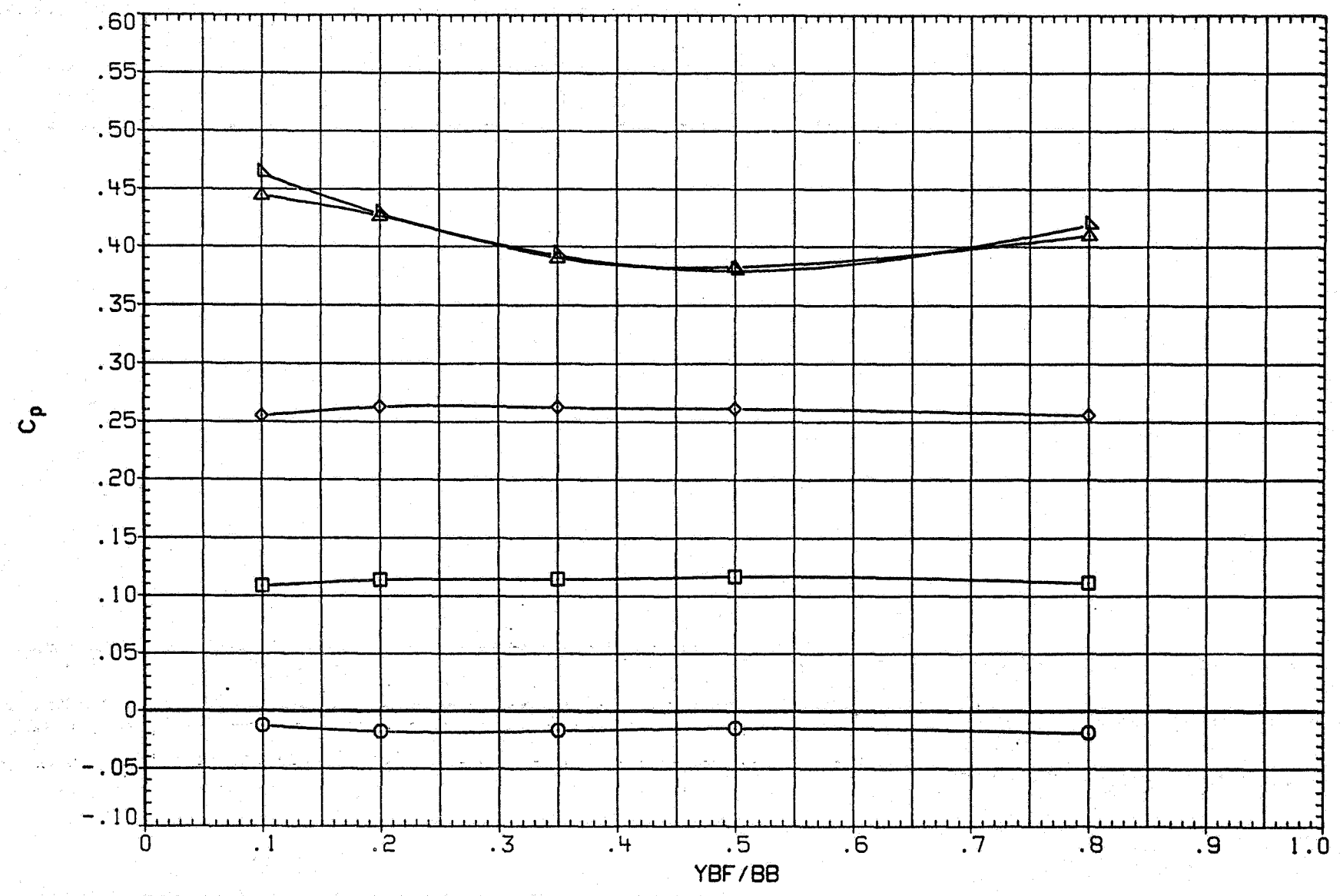


FIG. 125 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

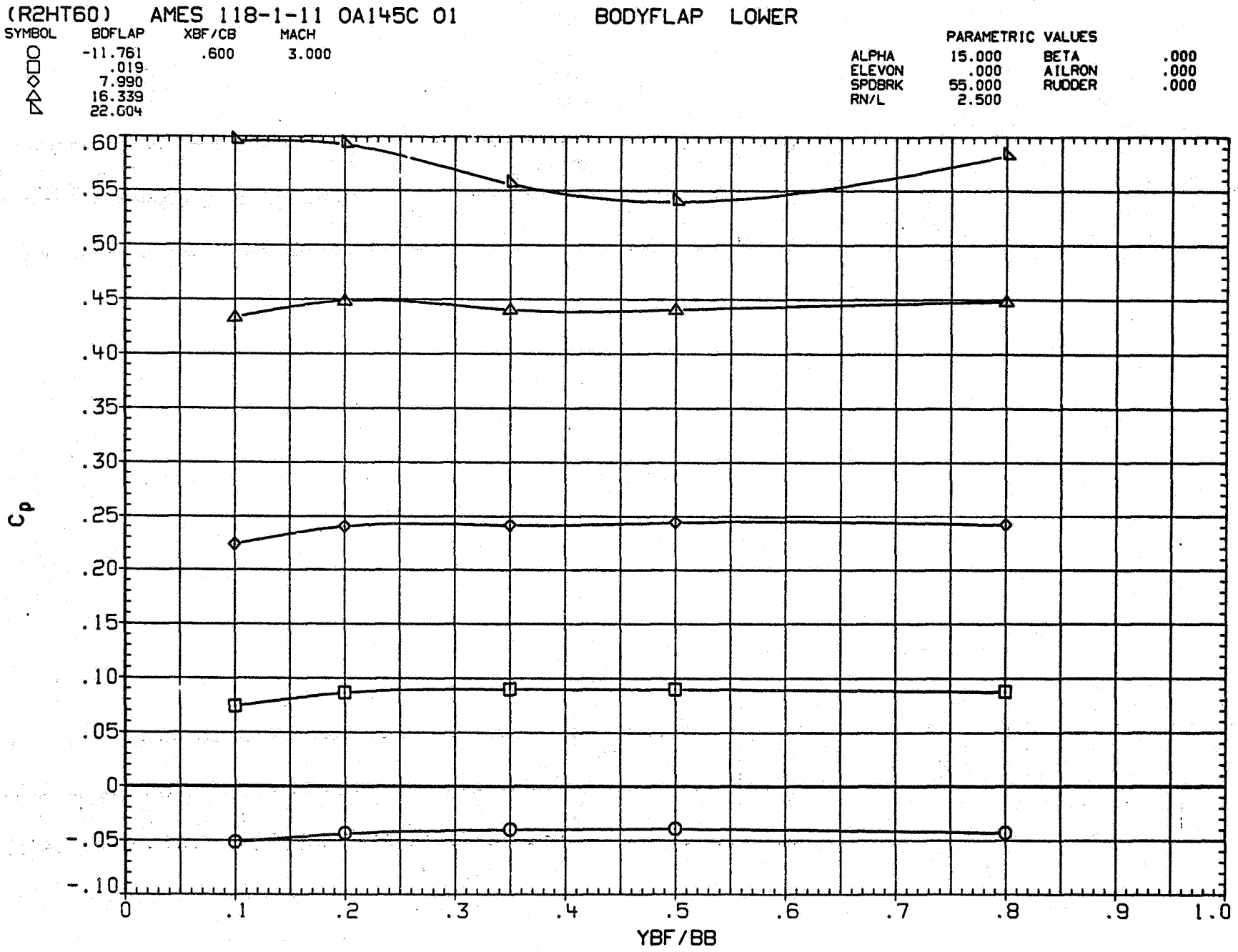


FIG. 125 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

(R2HT60) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	1.000	3.000
□	.019		
◇	7.990		
△	16.339		
◁	22.604		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

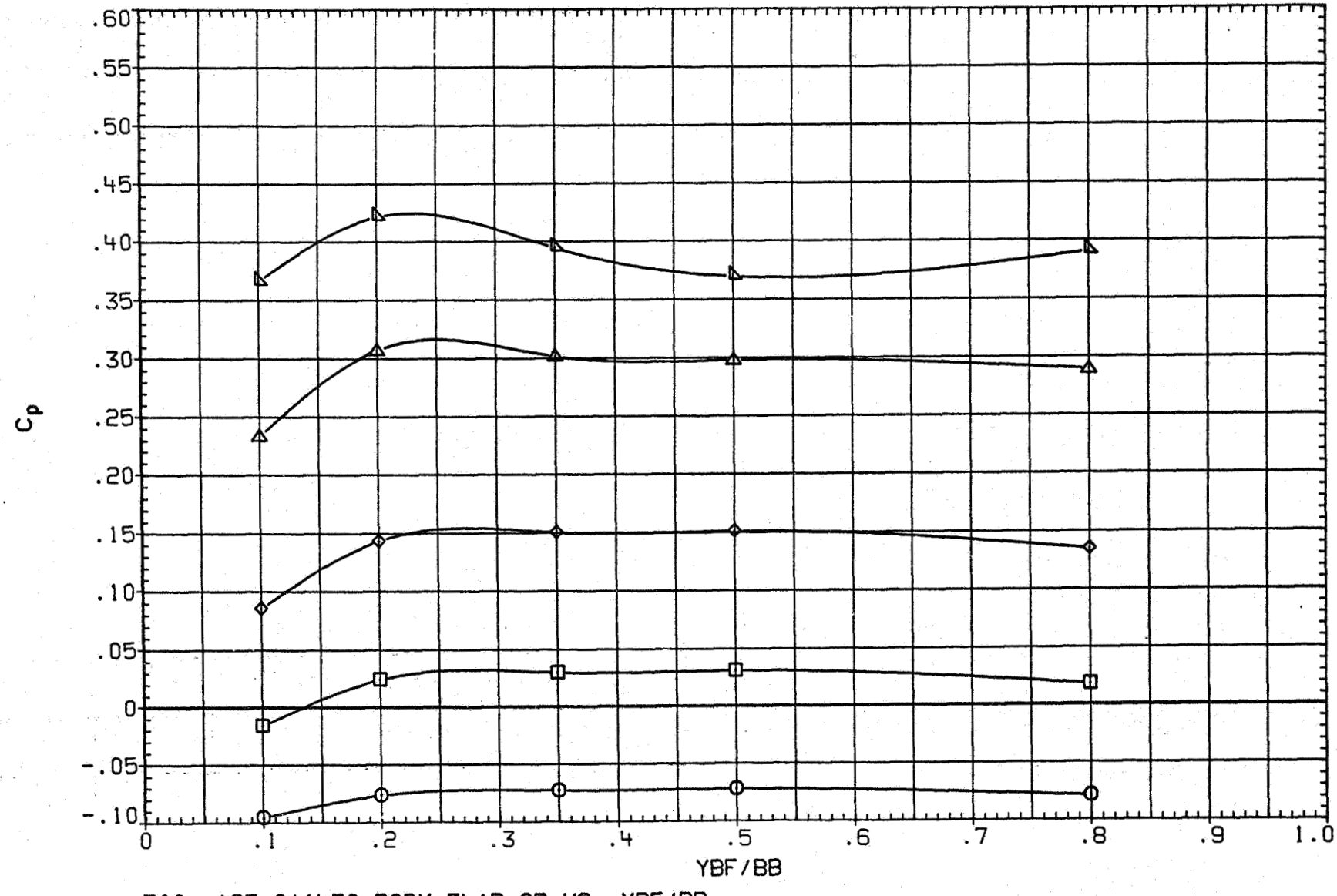


FIG. 125 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 15.0

(R2HT61) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	-.200	3.001
□	.019		
◇	8.020		
△	16.328		
◁	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

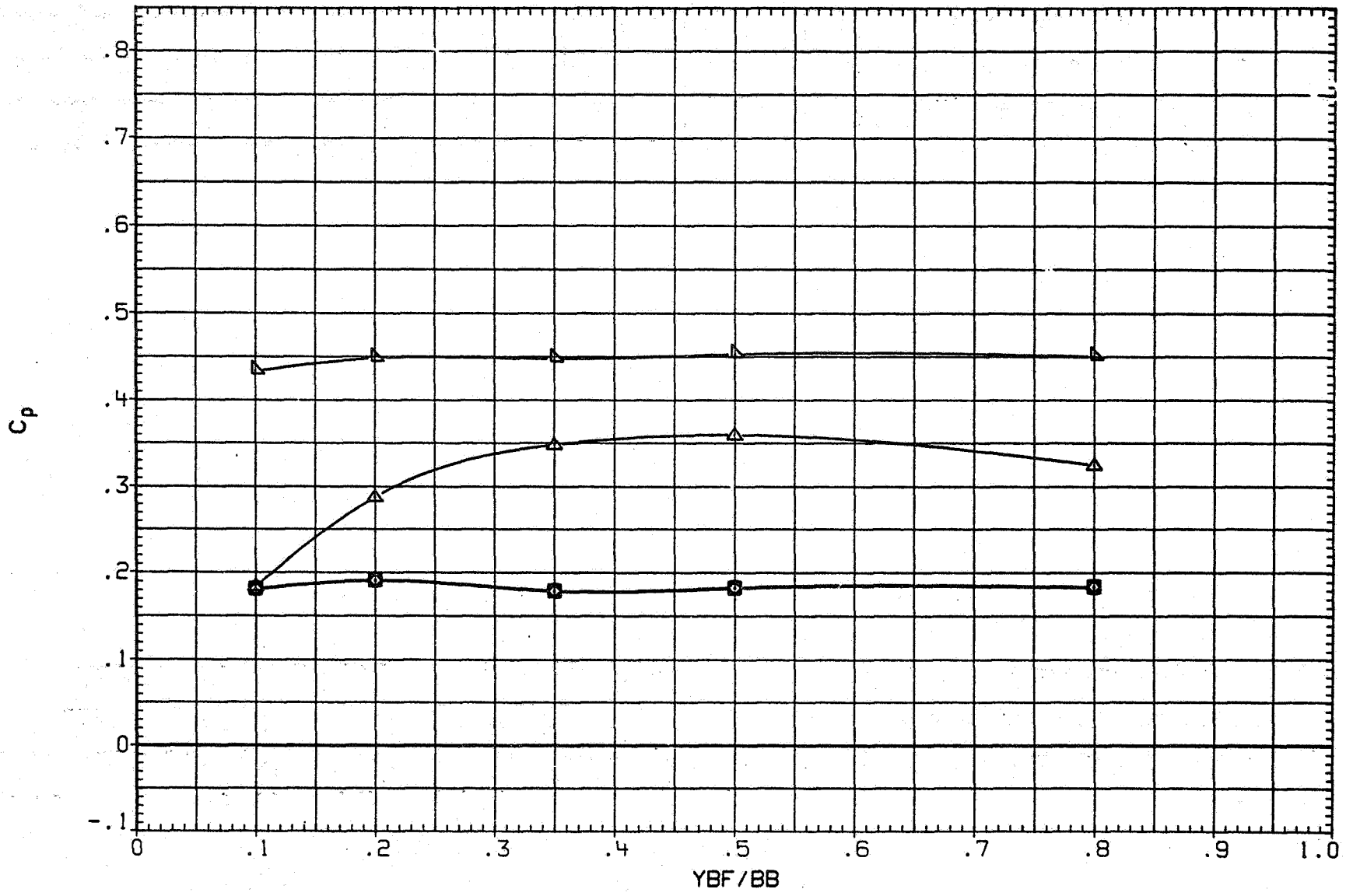


FIG. 126 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

(R2HT61) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	.200	3.001
□	.019		
◇	8.020		
△	16.328		
◁	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

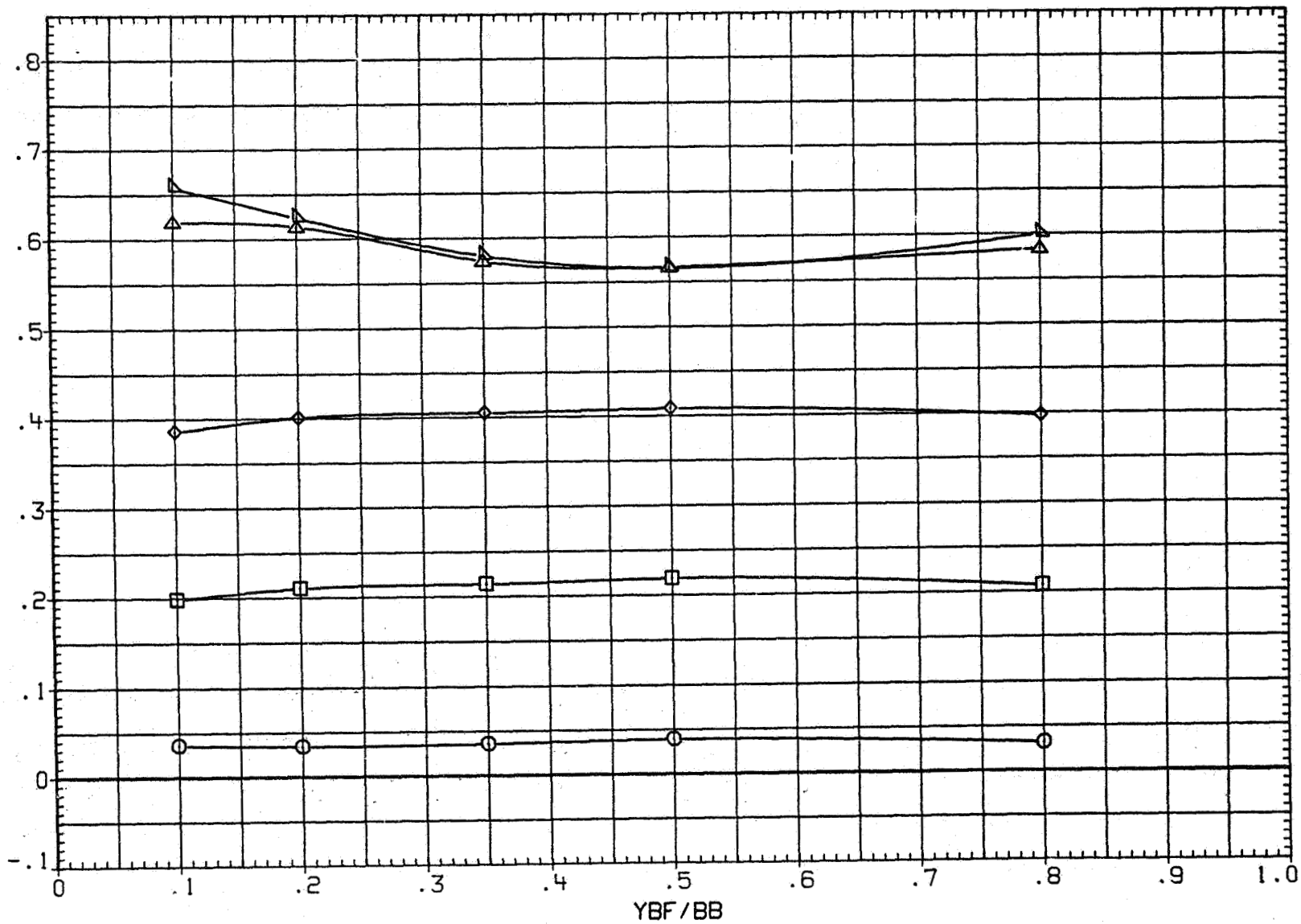


FIG. 126 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

(R2HT61) AMES 118-1-11 0A145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	.600	3.001
□	.019		
◇	8.020		
△	16.328		
◁	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

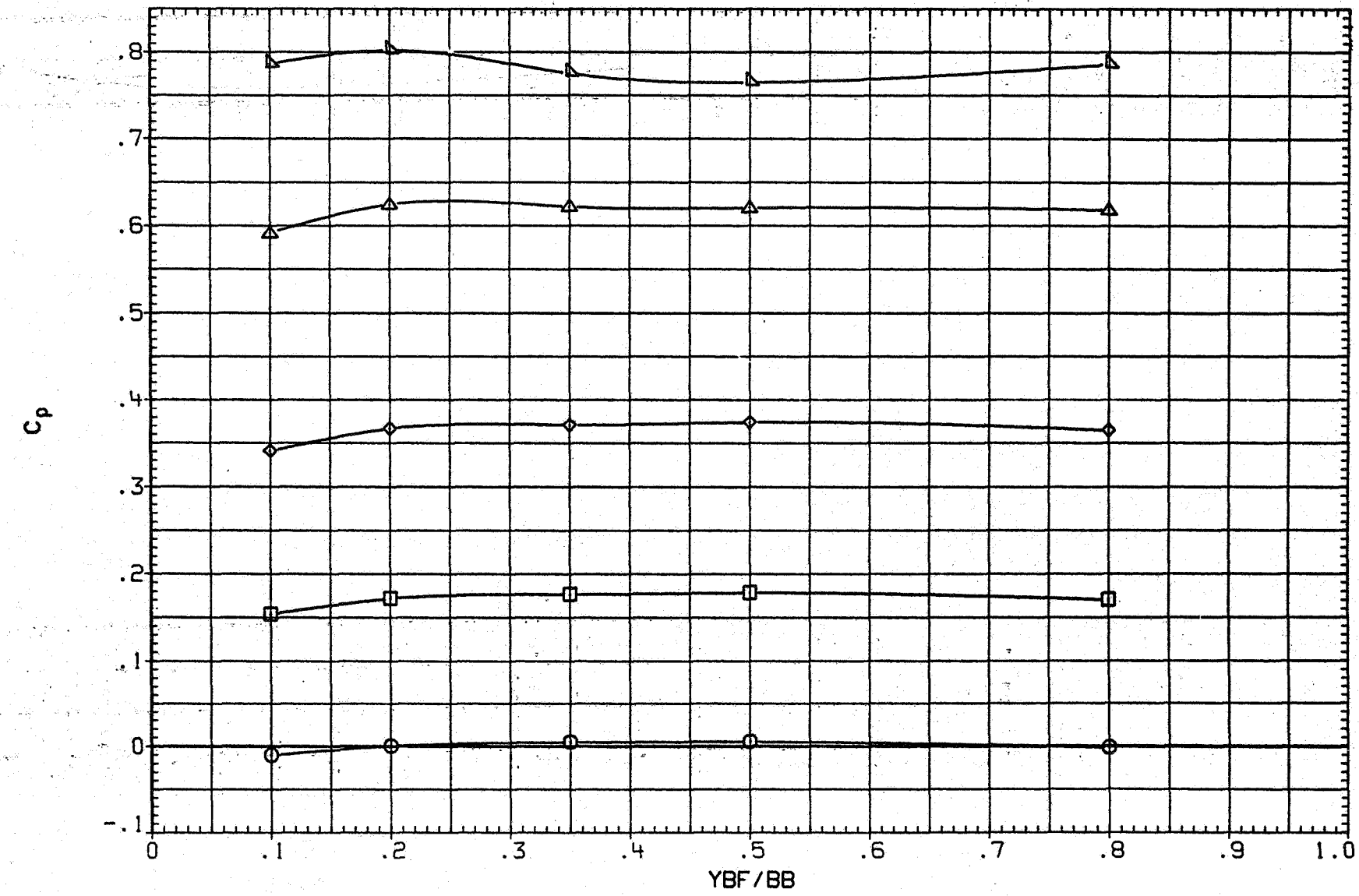


FIG. 126 0A145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

(R2HT61) AMES 118-1-11 OA145C 01 BODYFLAP LOWER

SYMBOL	BDFLAP	XBF/CB	MACH
○	-11.761	1.000	3.001
□	.019		
◇	8.020		
△	16.328		
◁	22.585		

PARAMETRIC VALUES

ALPHA	20.000	BETA	.000
ELEVON	.000	AILRON	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

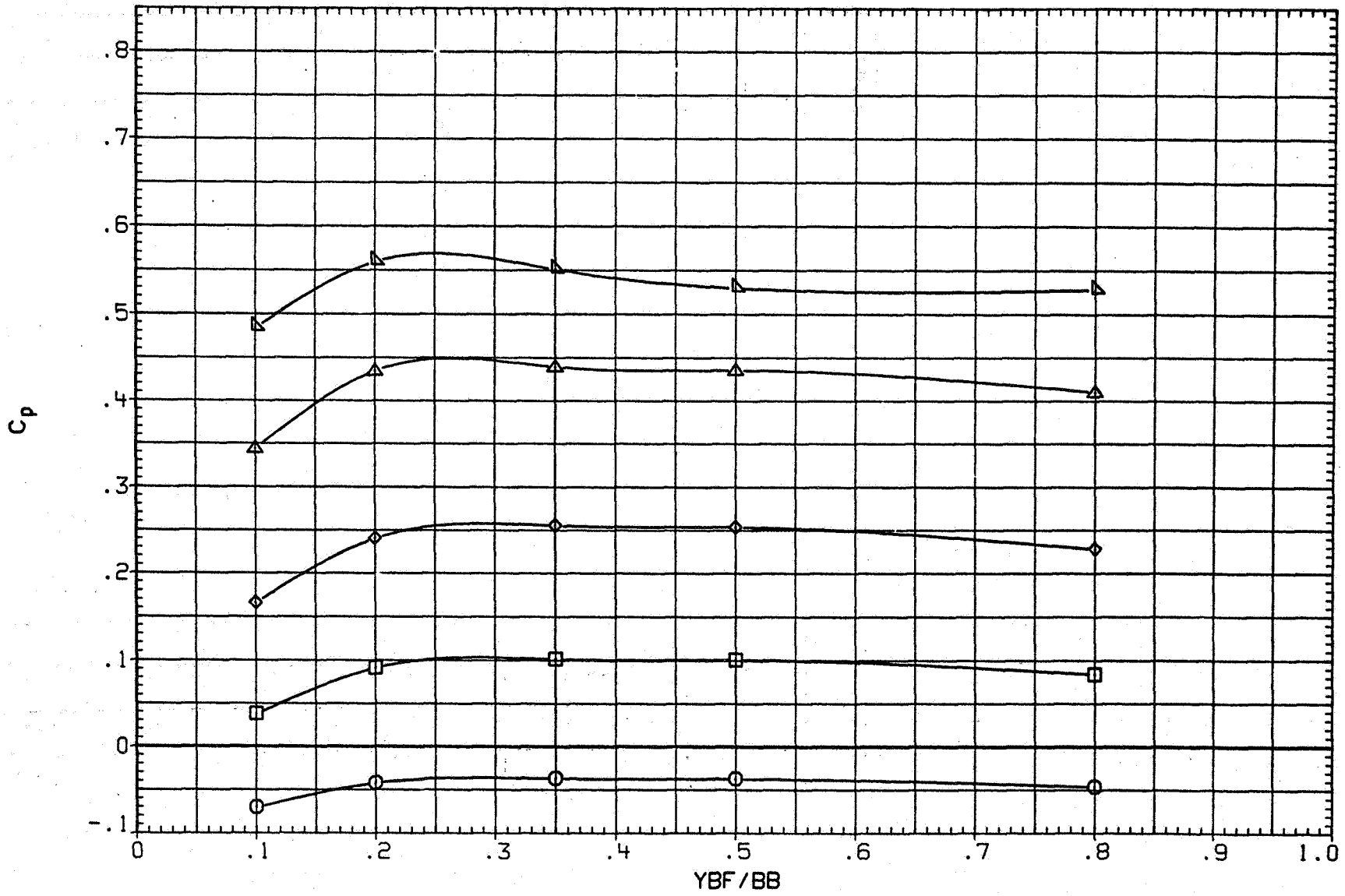


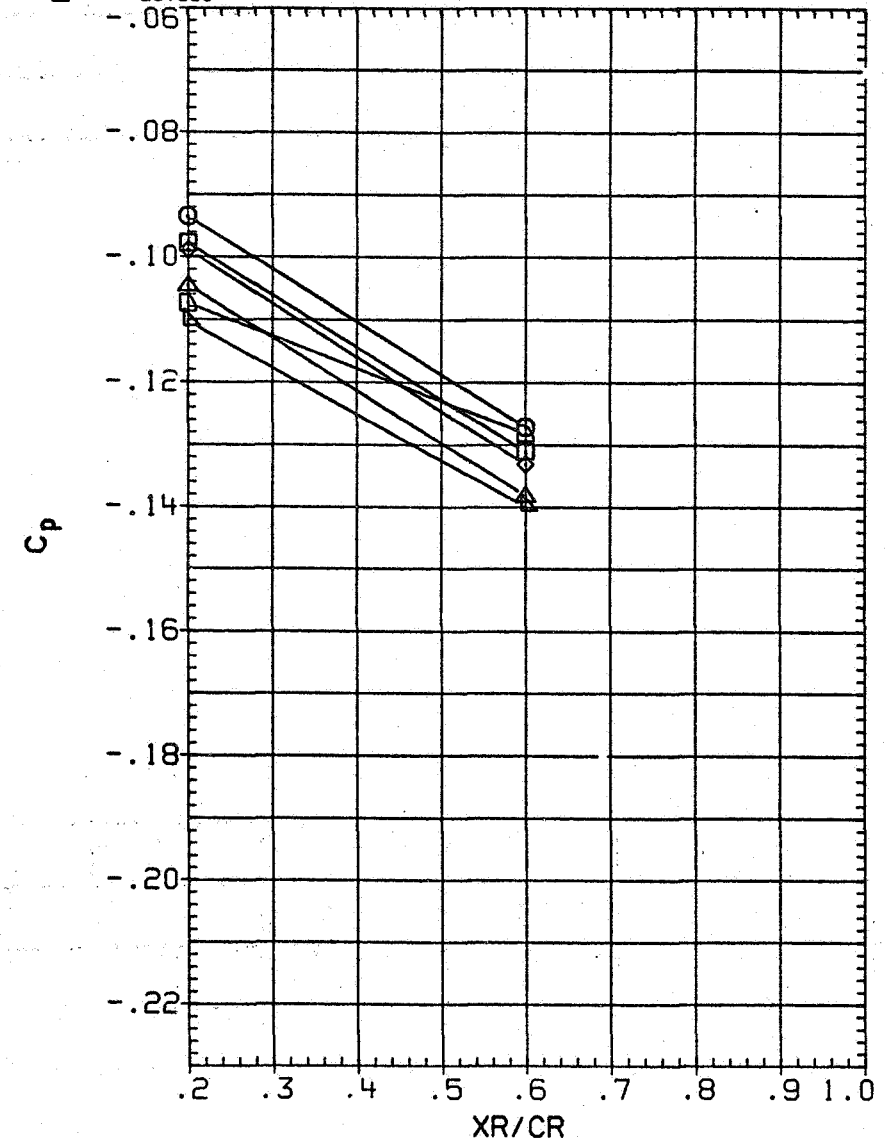
FIG. 126 OA145C BODY FLAP CP VS. YBF/BB
LOWER SURFACE, BDFLAP EFFECT AT ALPHA = 20.0

(R2HX02) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.100	3.001
□	5.887	.200	
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		



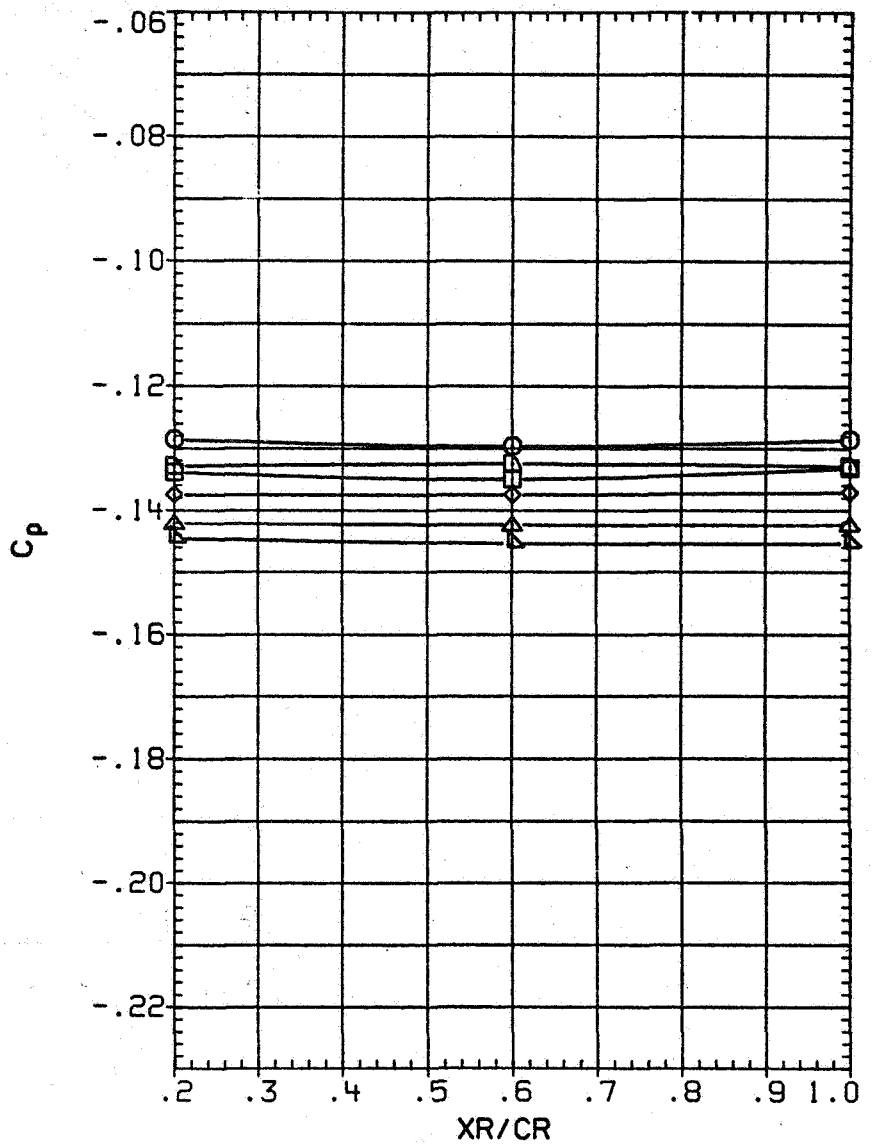


FIG 127 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HX02) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.400	3.001
□	5.887	.500	
◇	9.949		
△	15.195		
◁	20.260		
D	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

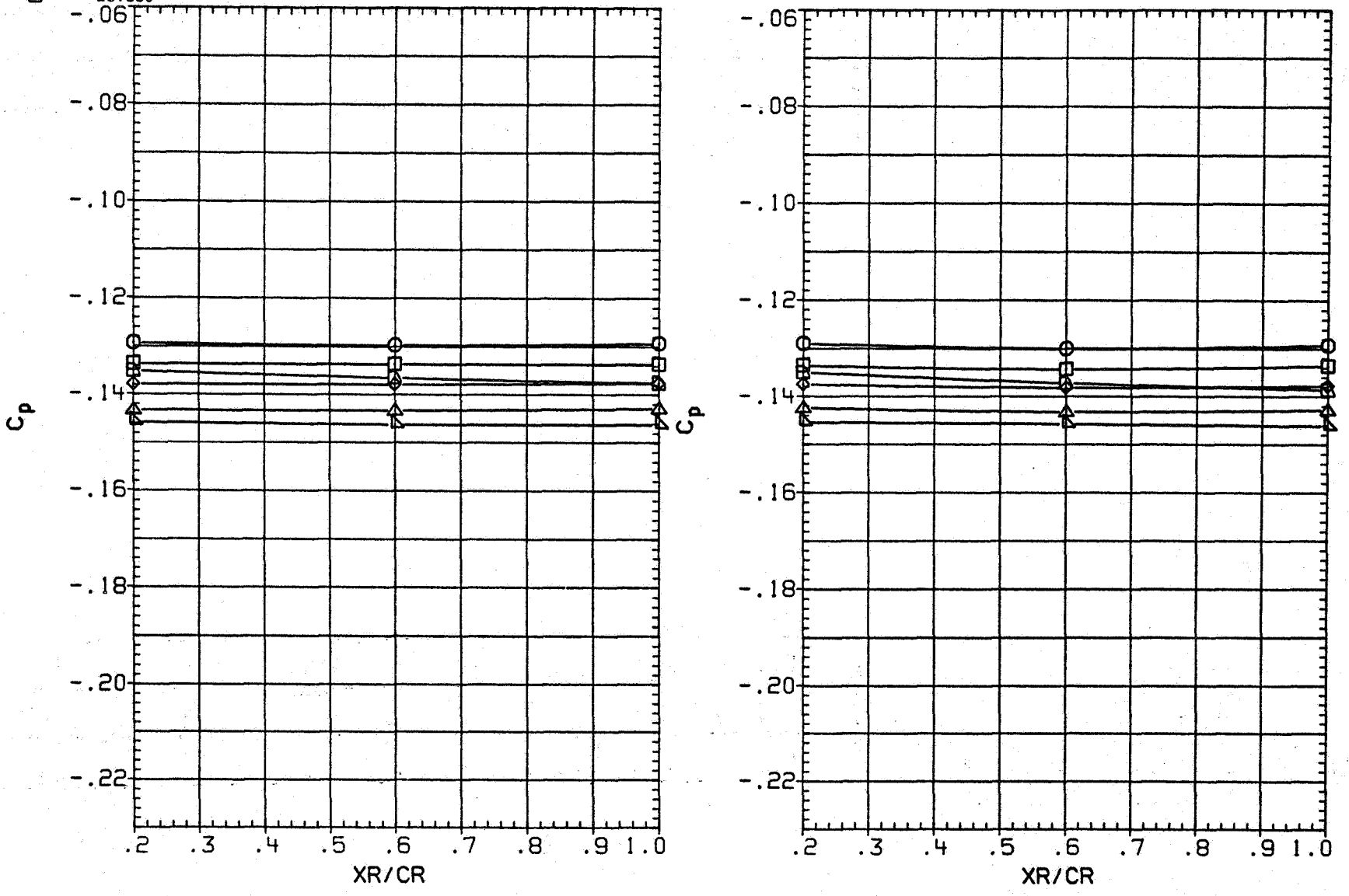


FIG 127 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HX02) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.700	3.001
□	5.887	.900	
◇	9.949		
◁	15.195		
△	20.260		
▱	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

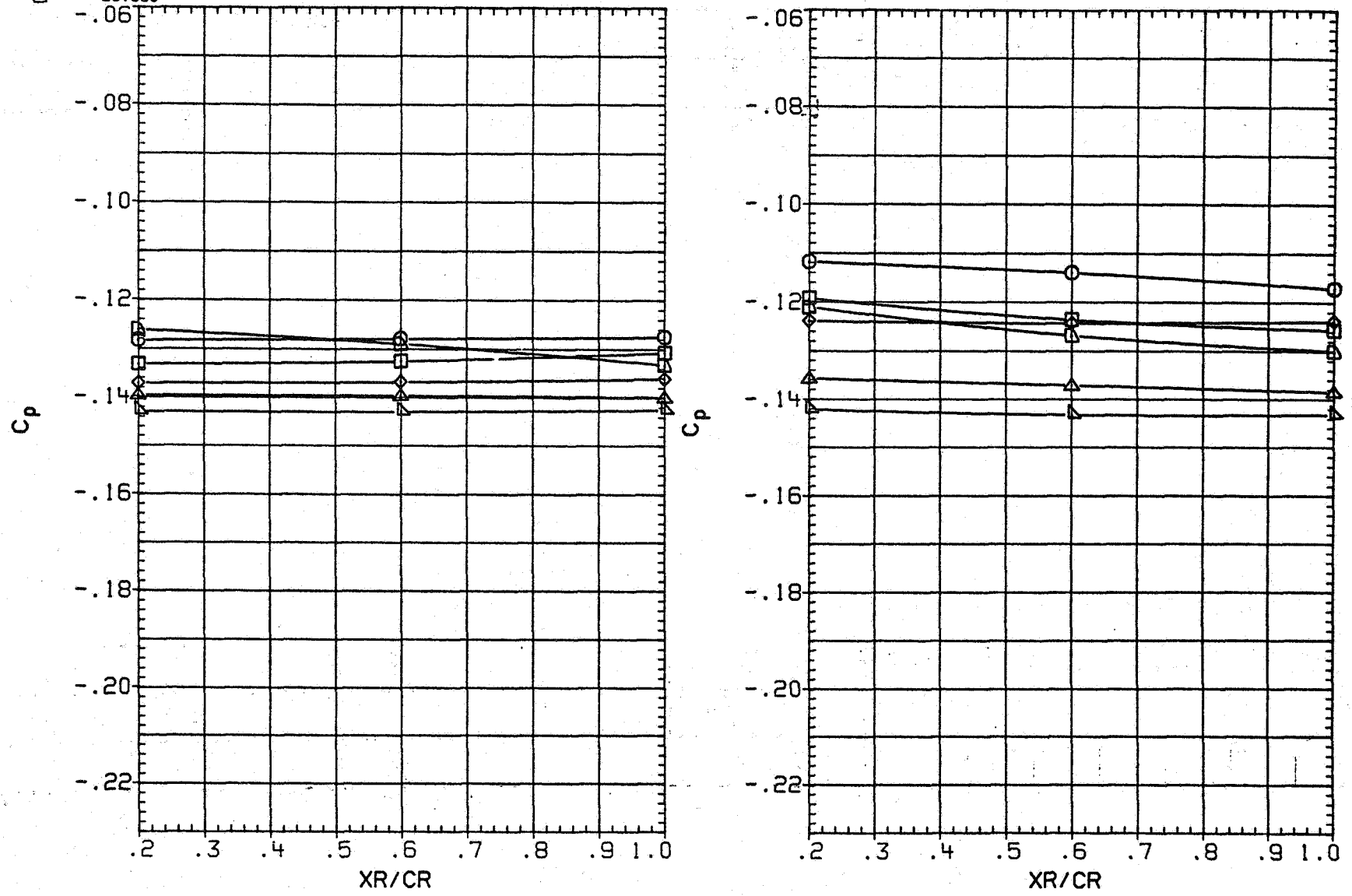


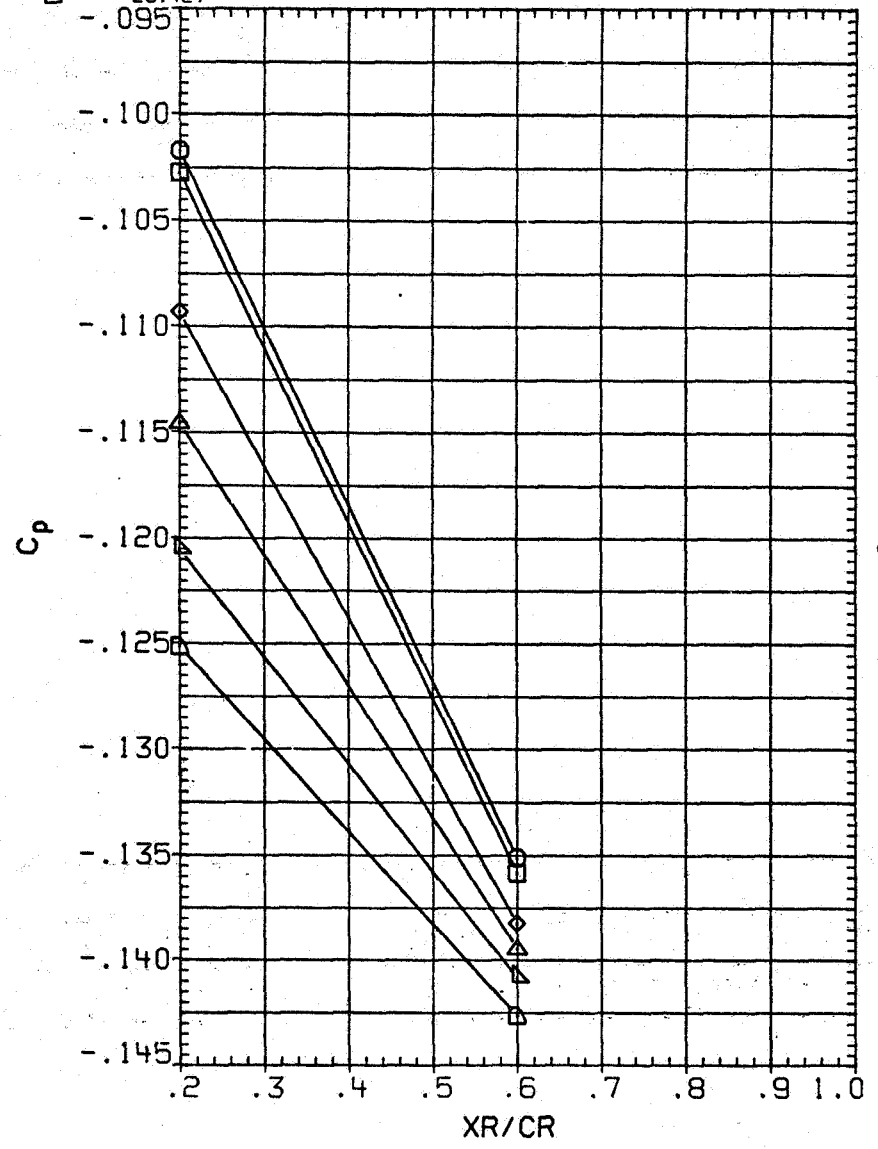
FIG 127 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HX64) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.100	3.000
□	4.984	.200	
◇	10.029		
△	15.190		
◁	20.237		
D	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		



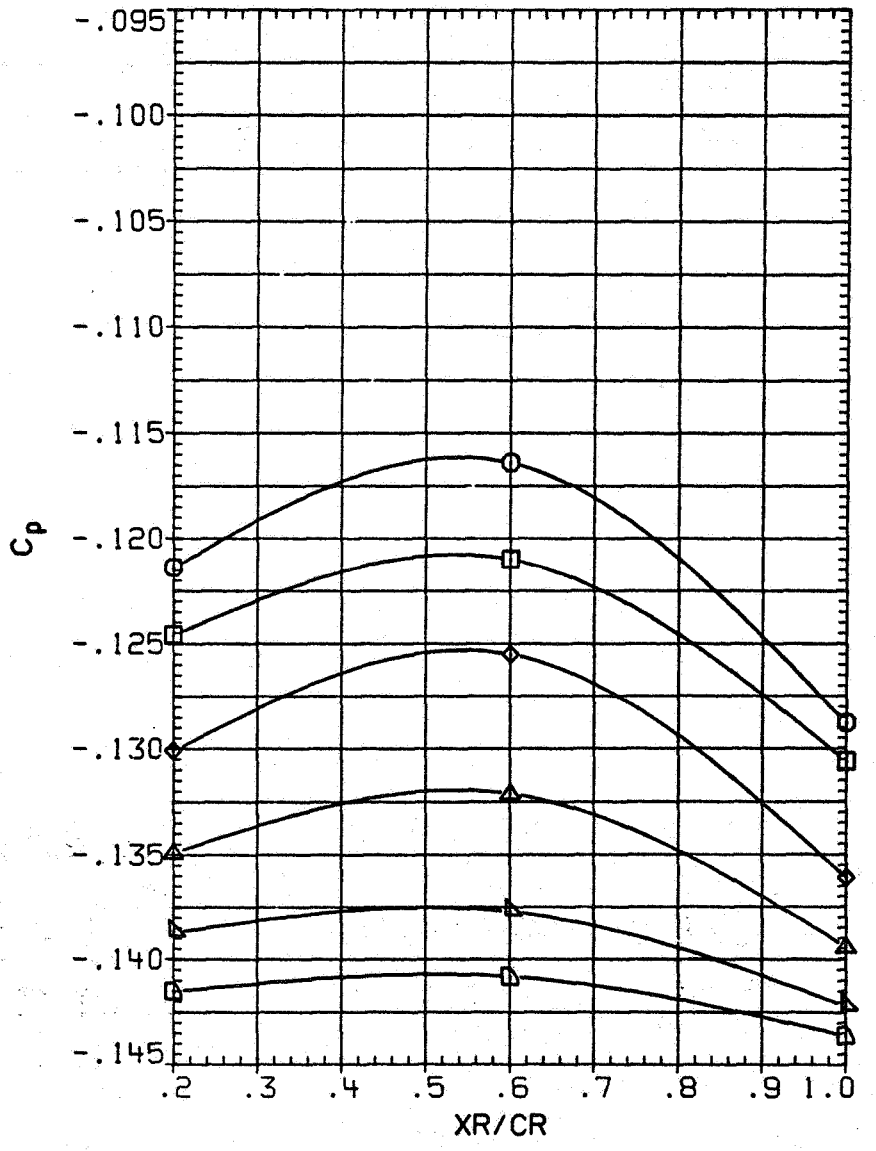


FIG 128 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HX64) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.400	3.000
□	4.984	.500	
◇	10.029		
△	15.190		
◺	20.237		
▷	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

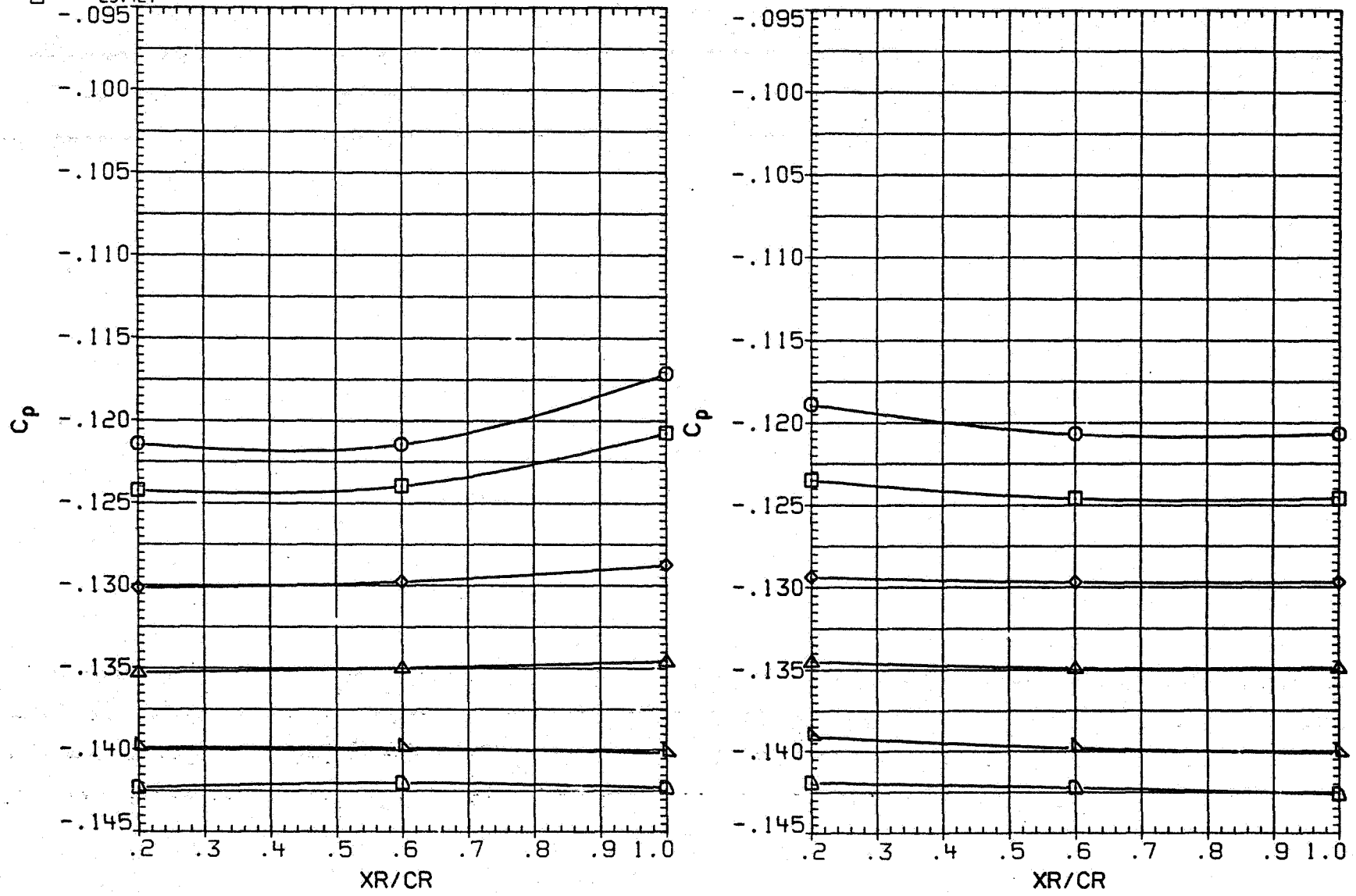


FIG 128 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HX64) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.700	3.000
□	4.984	.900	
◇	10.029		
△	15.190		
▽	20.237		
▷	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

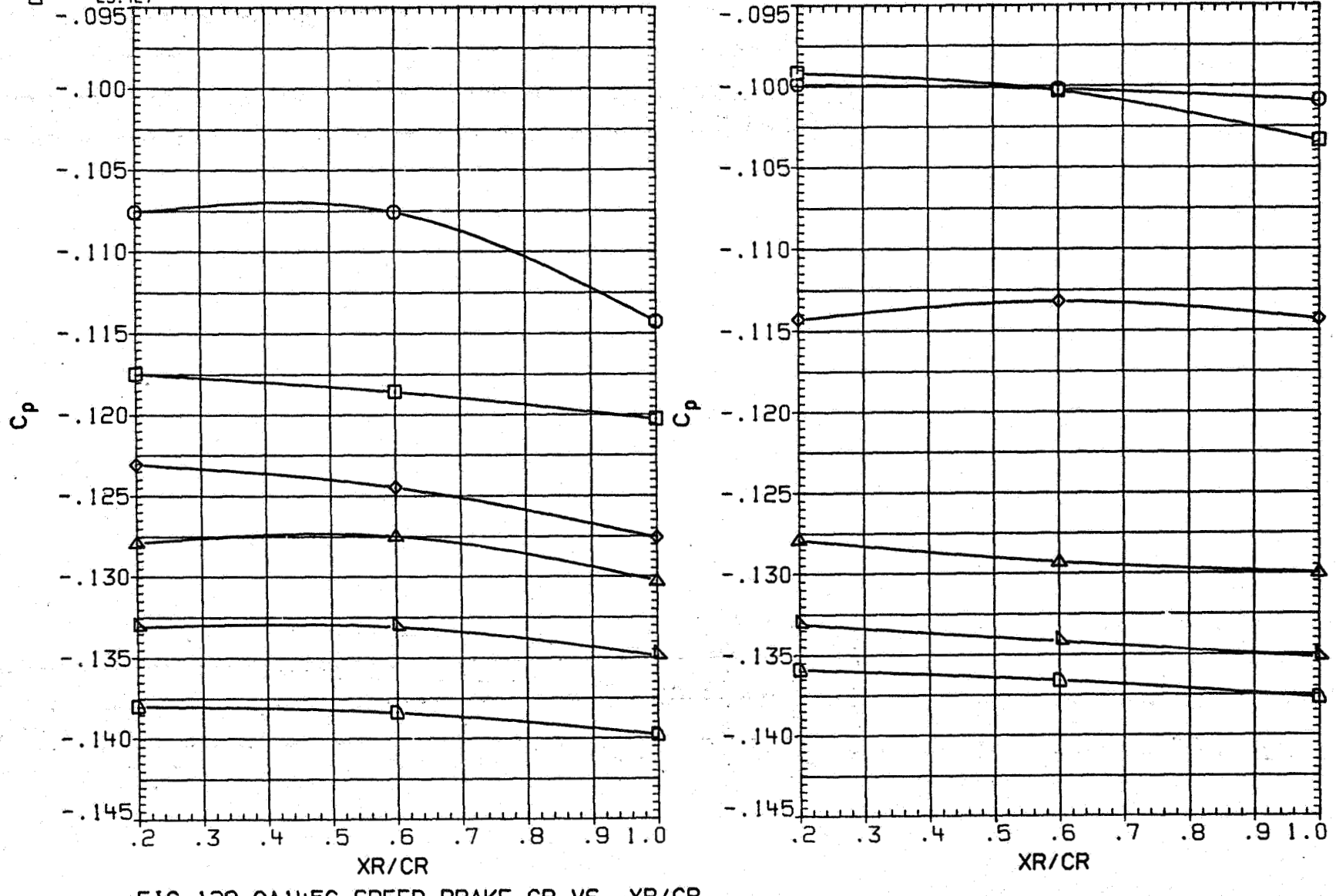


FIG 128 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 25

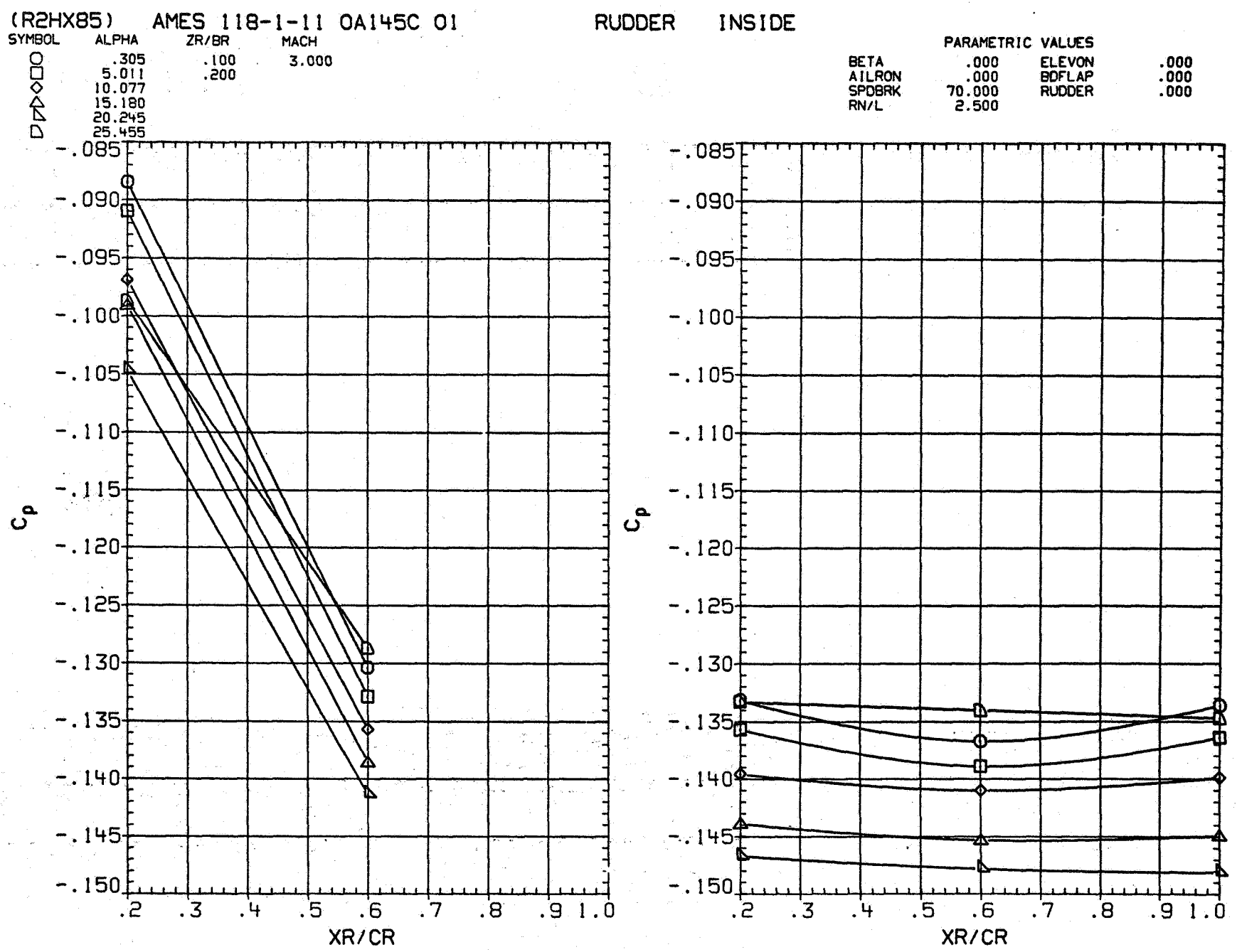


FIG 129 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HX85) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.305	.400	3.000
□	5.011	.500	
◇	10.077		
△	15.180		
◁	20.245		
▷	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

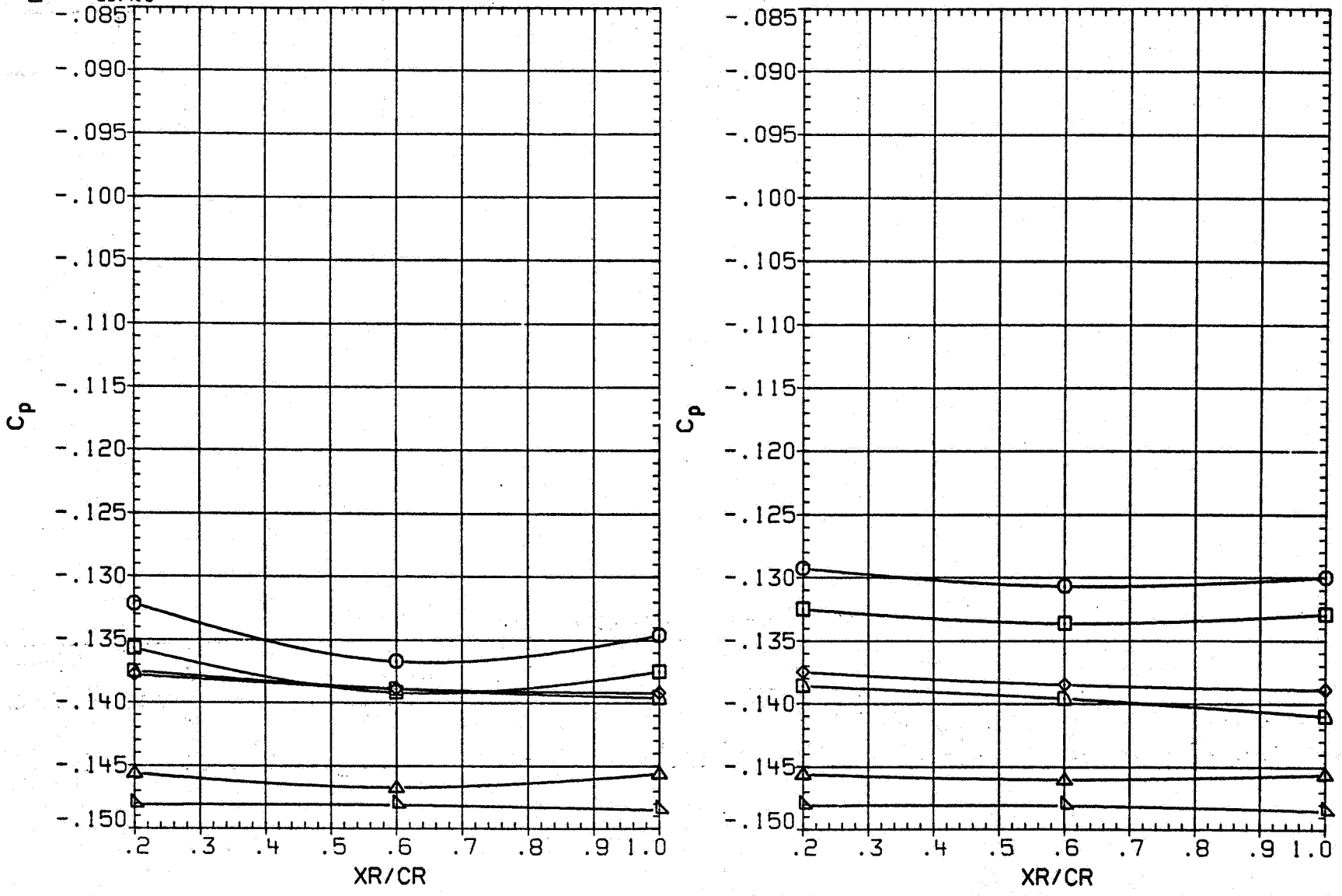


FIG 129 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HX85) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.305	.700	3.000
□	5.011	.900	
◇	10.077		
△	15.180		
◁	20.245		
▷	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

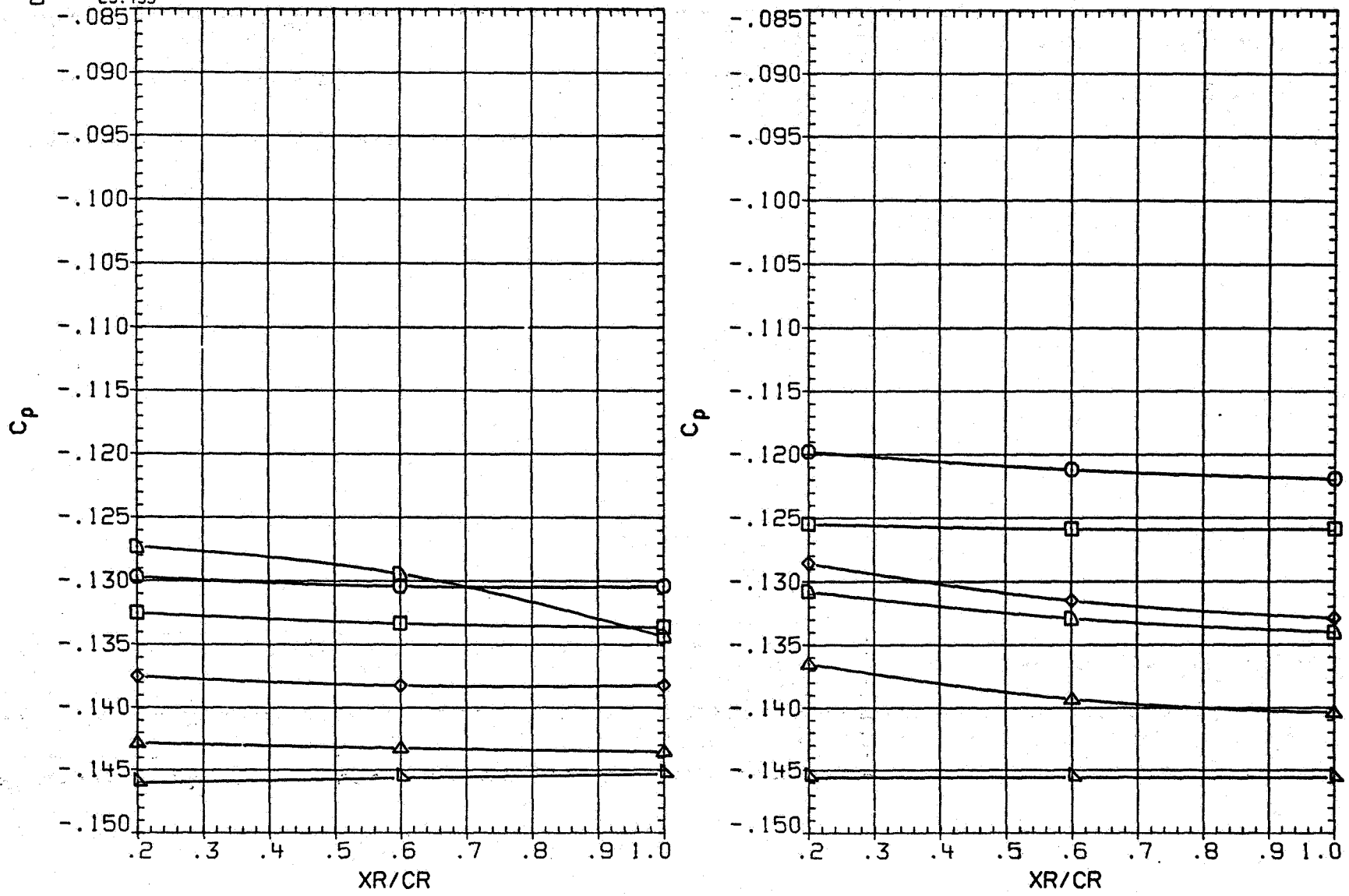


FIG 129 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HX94) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.100	3.000
□	5.049	.200	
◇	10.118		
△	15.169		
◁	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

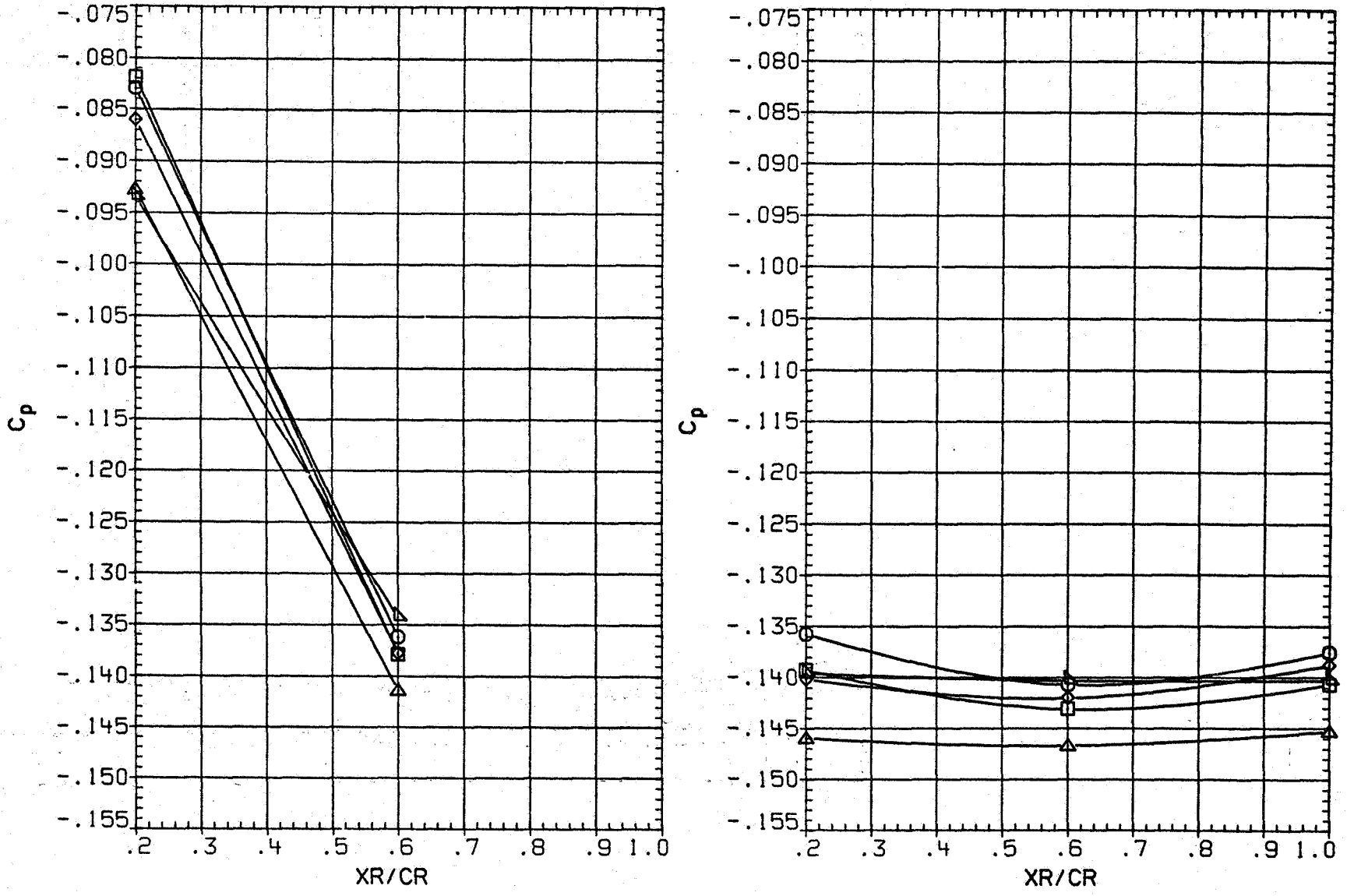


FIG 130 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HX94) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.400	3.000
□	5.049	.500	
◇	10.118		
△	15.169		
◁	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

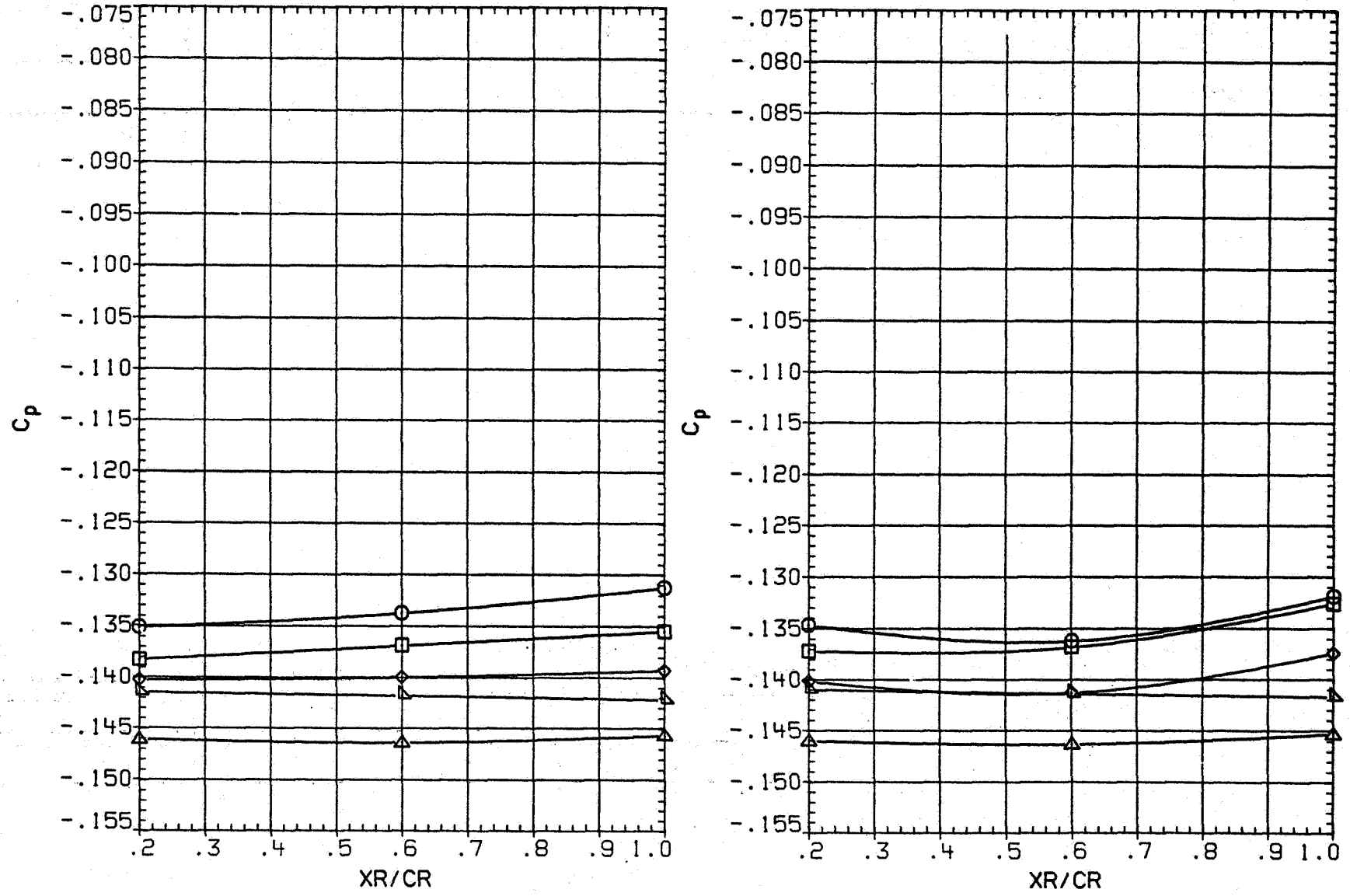


FIG 130 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HX94) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.700	3.000
□	5.049	.900	
◇	10.118		
△	15.169		
◁	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

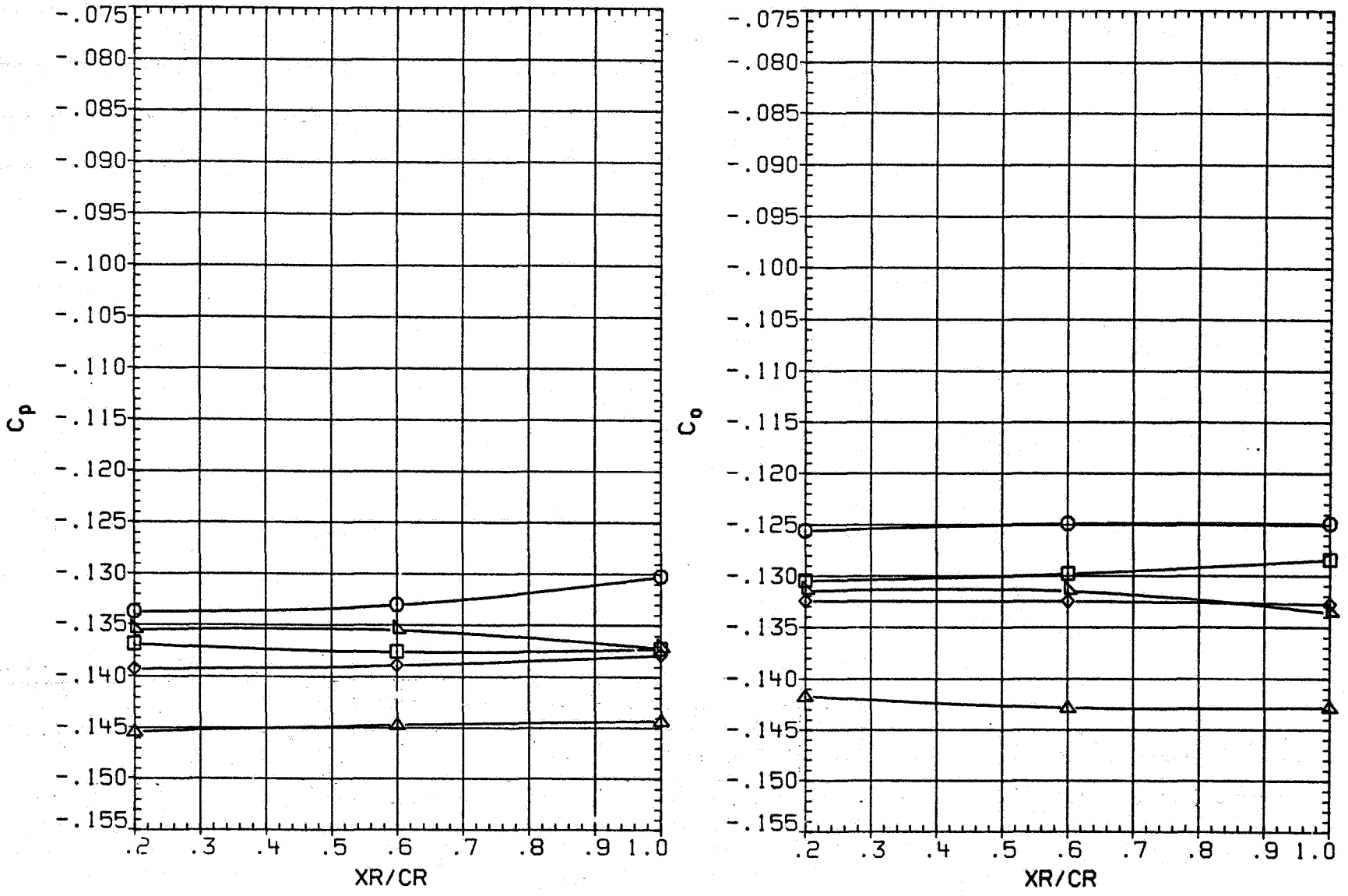


FIG 130 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HX07) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.100	3.001
□	-2.116	.200	
◇	.008		
△	2.137		
▽	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

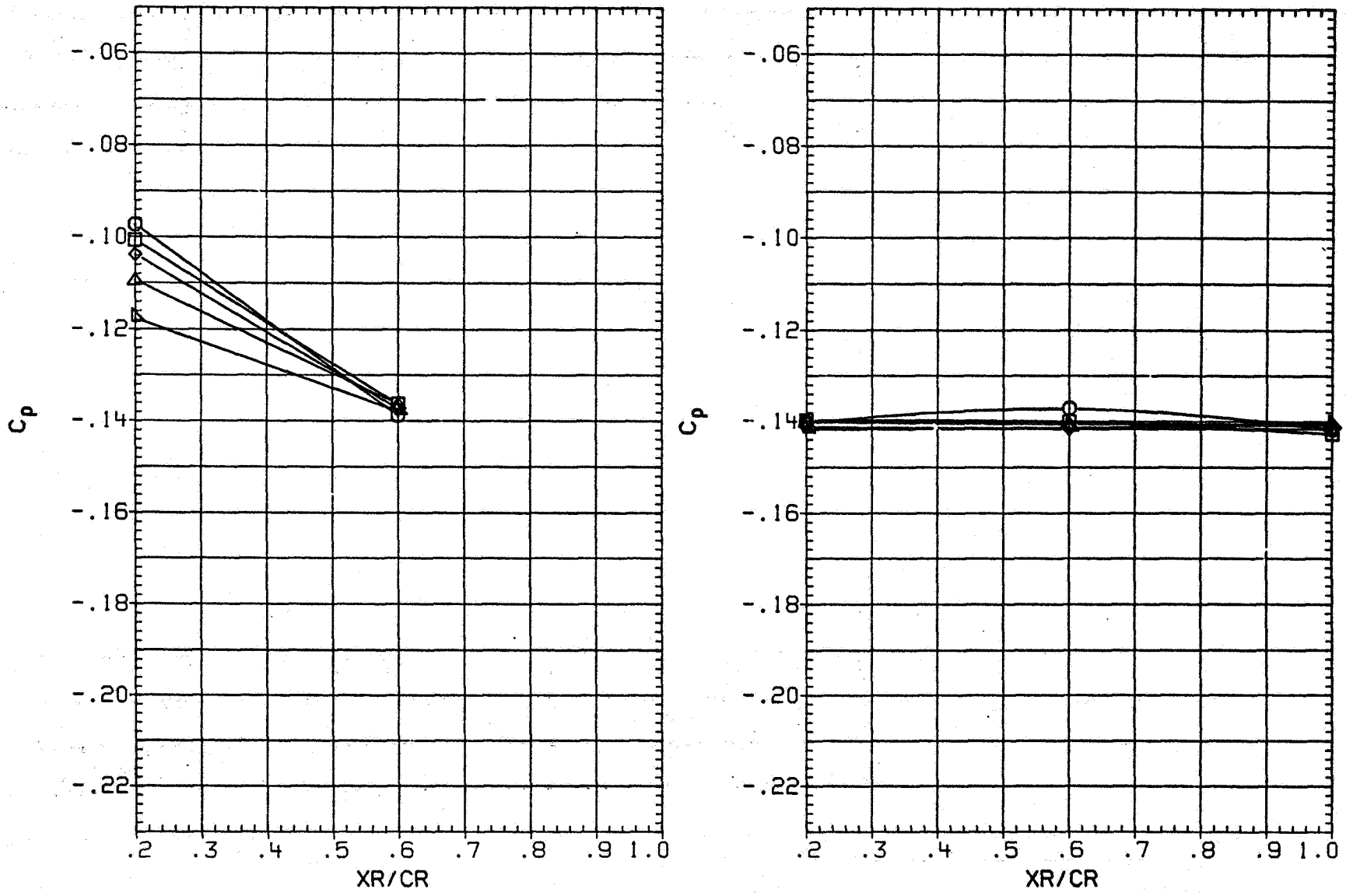


FIG 131 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HX07) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.400	3.001
□	-2.116	.500	
◇	.008		
△	2.137		
◁	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

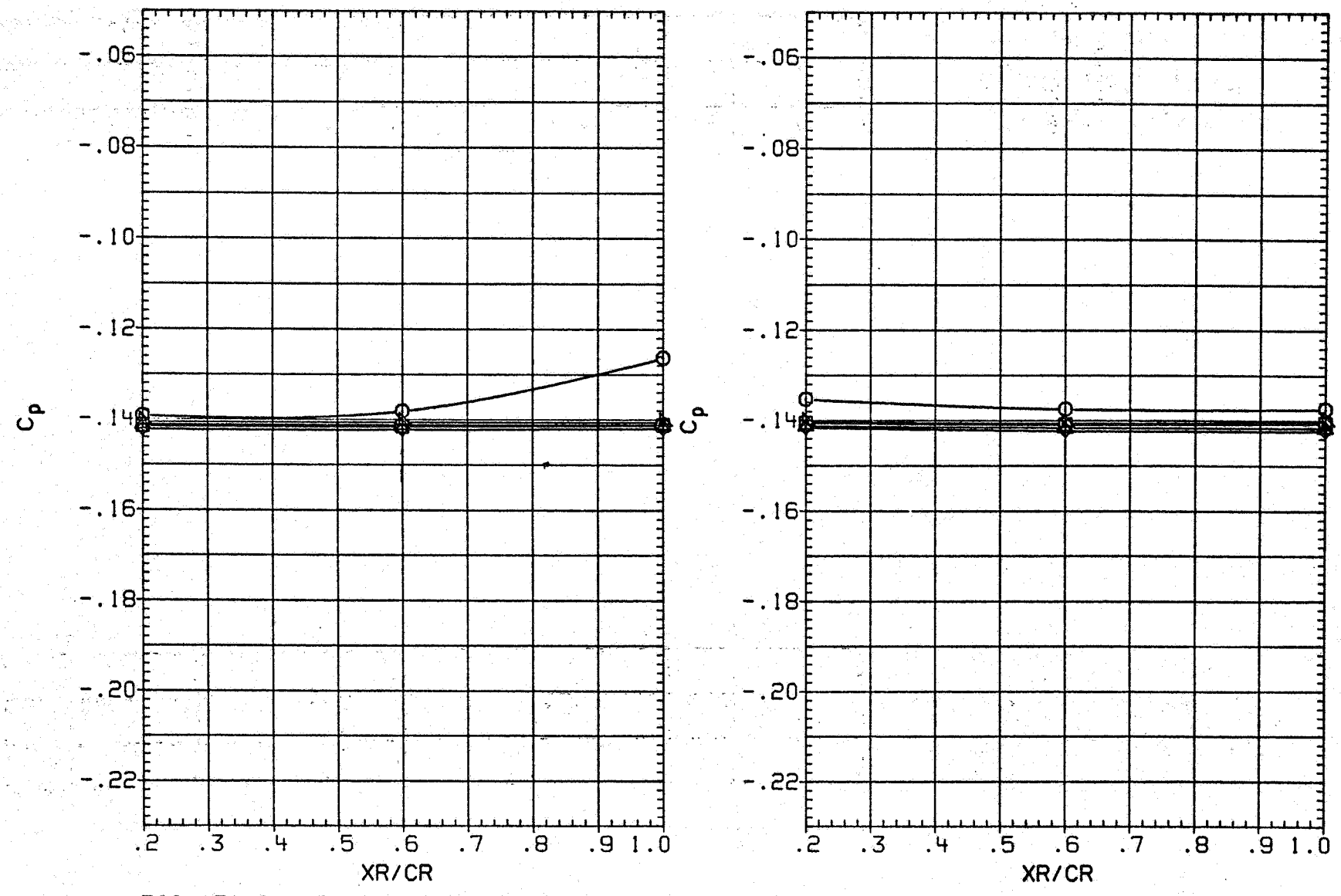


FIG 131 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HX07) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.700	3.001
□	-2.116	.900	
◇	.008		
◁	2.137		
△	6 366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

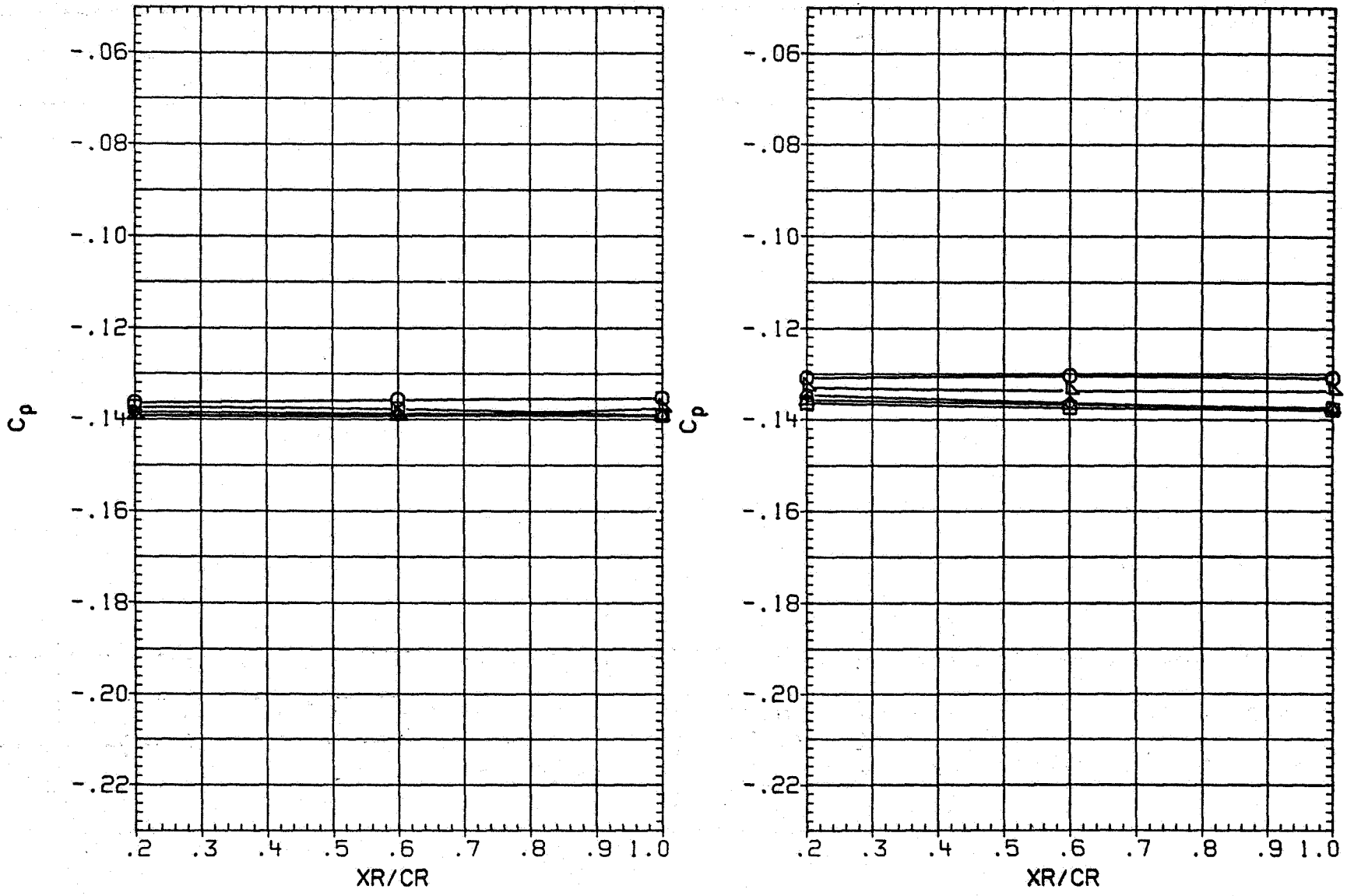


FIG 131 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HX66) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.100	3.000
□	-2.123	.200	
◇	-.009		
△	2.144		
◁	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

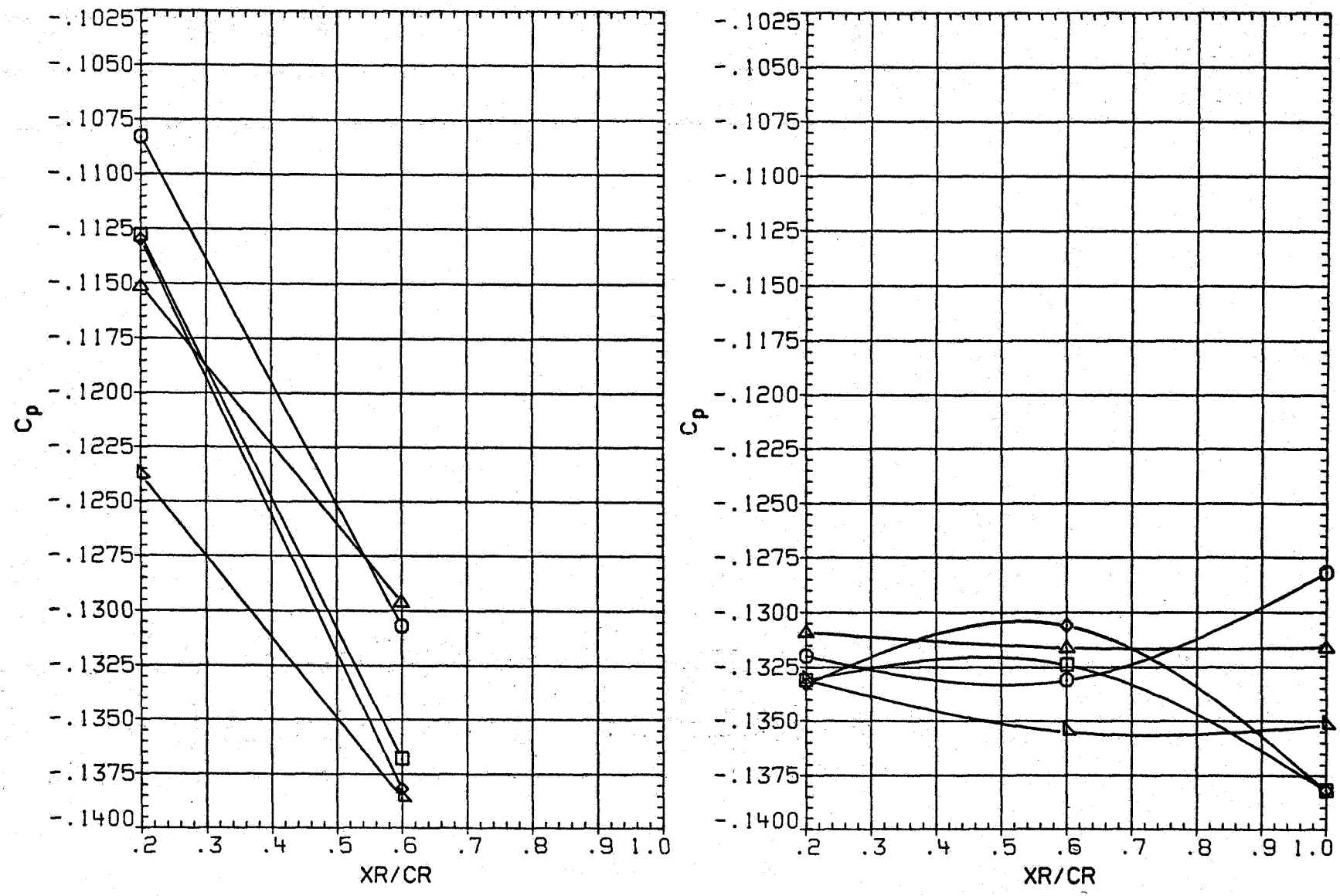


FIG 132 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HX66) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.400	3.000
□	-2.123	.500	
◇	-.009		
△	2.144		
◁	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

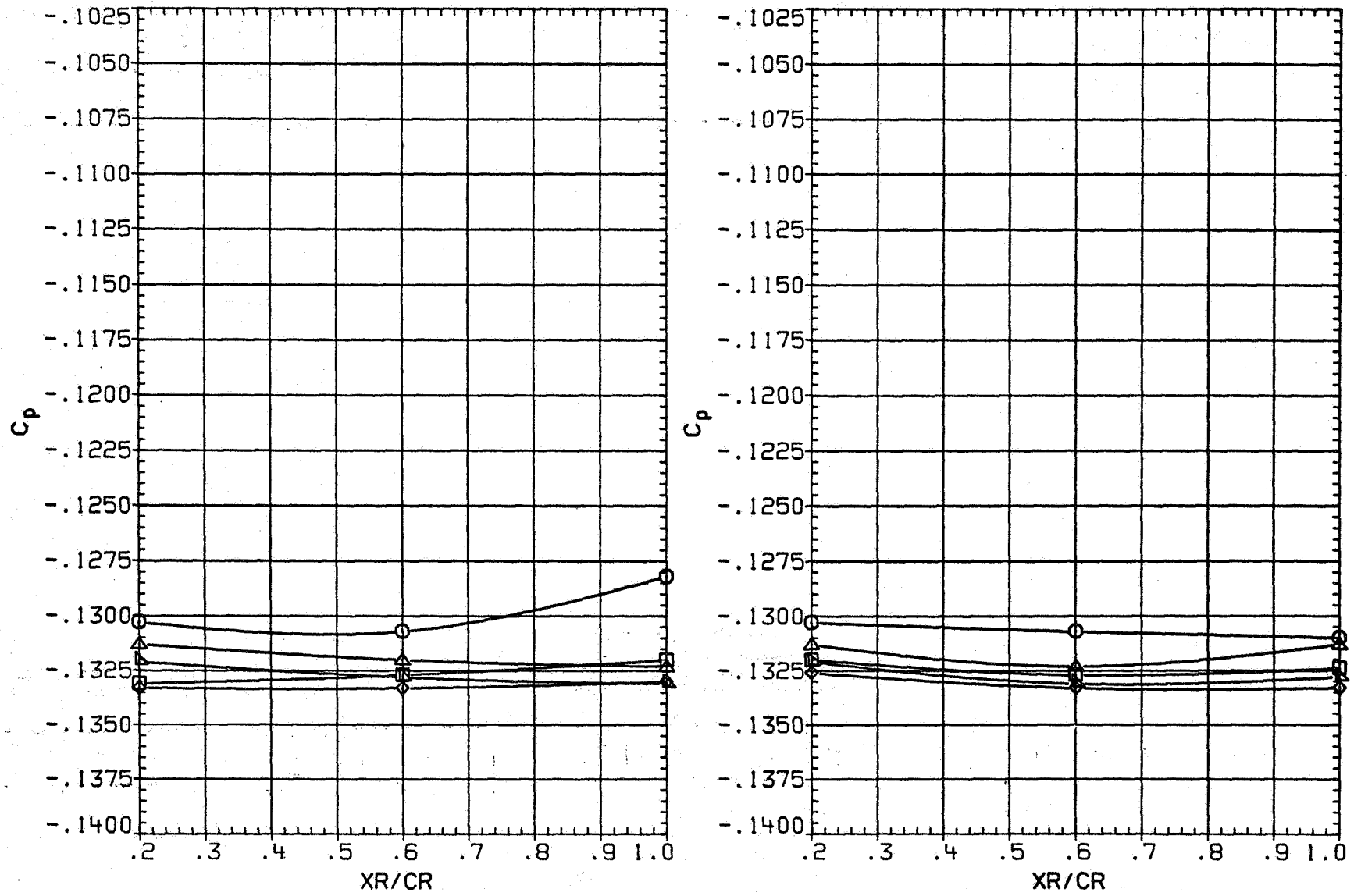


FIG 132 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HX66) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.700	3.000
□	-2.123	.900	
◇	-.009		
△	2.144		
◁	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

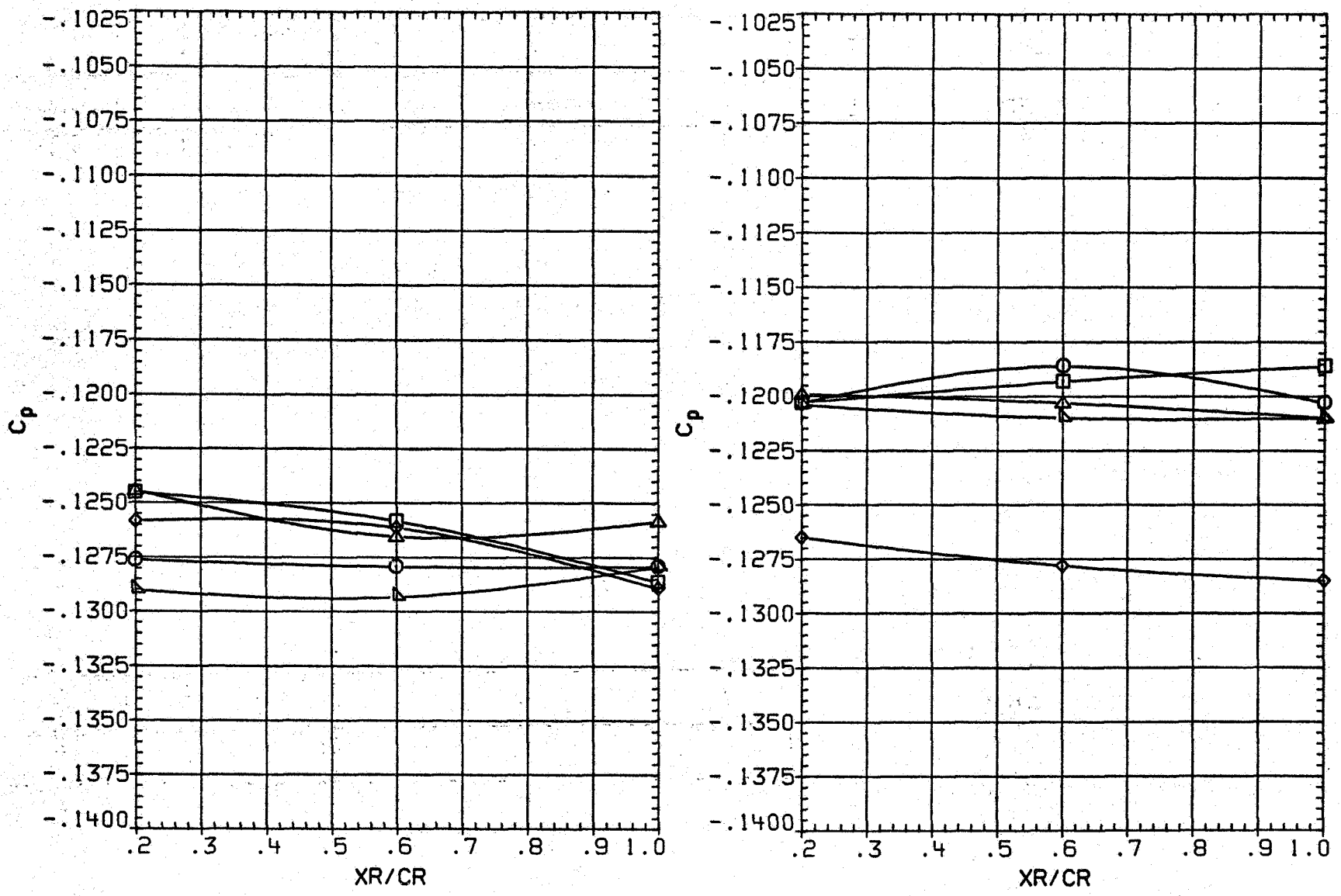


FIG 132 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HX96) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.100	3.000
□	-2.179	.200	
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

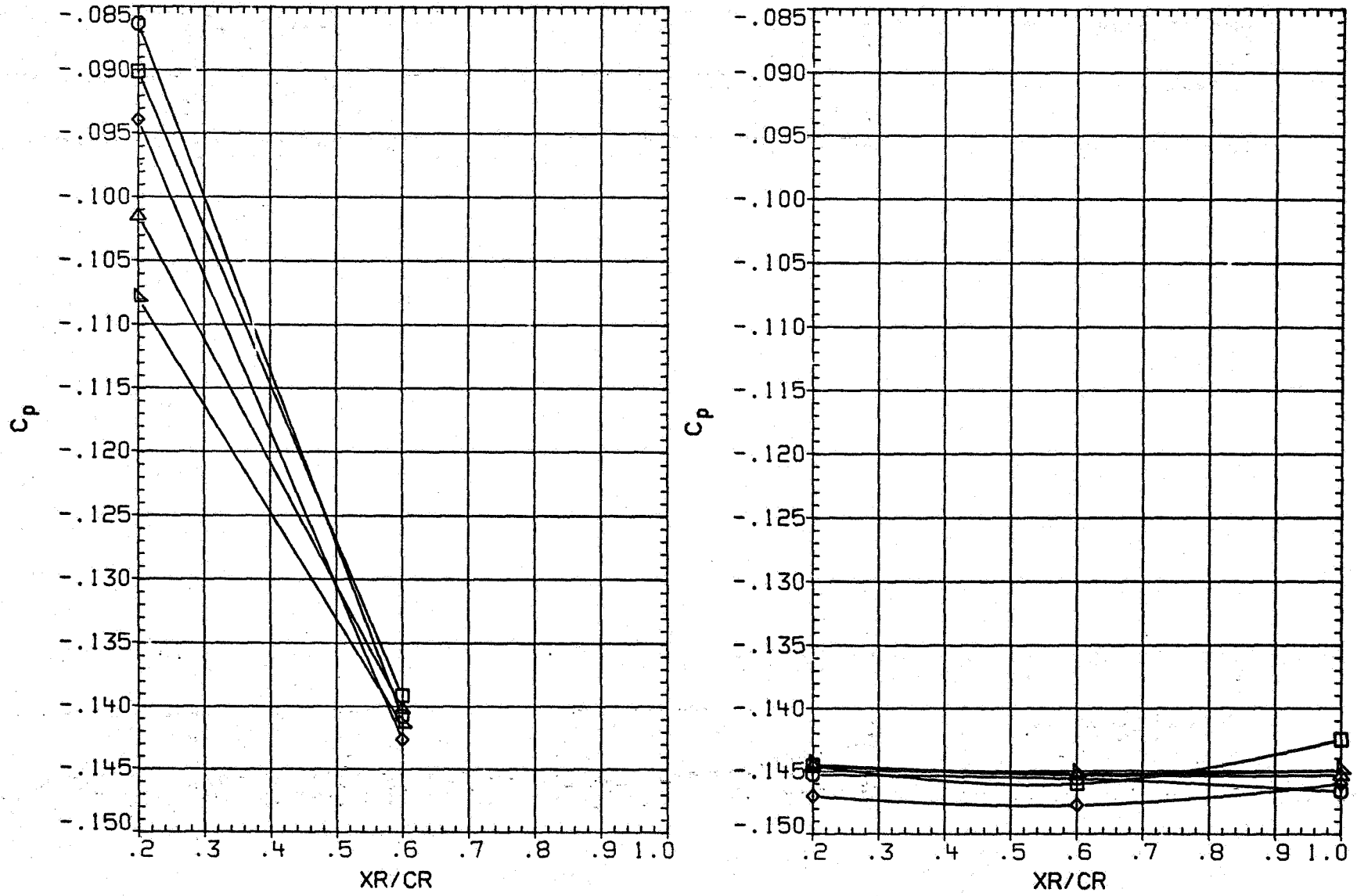


FIG 133 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HX96) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.400	3.000
□	-2.179	.500	
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

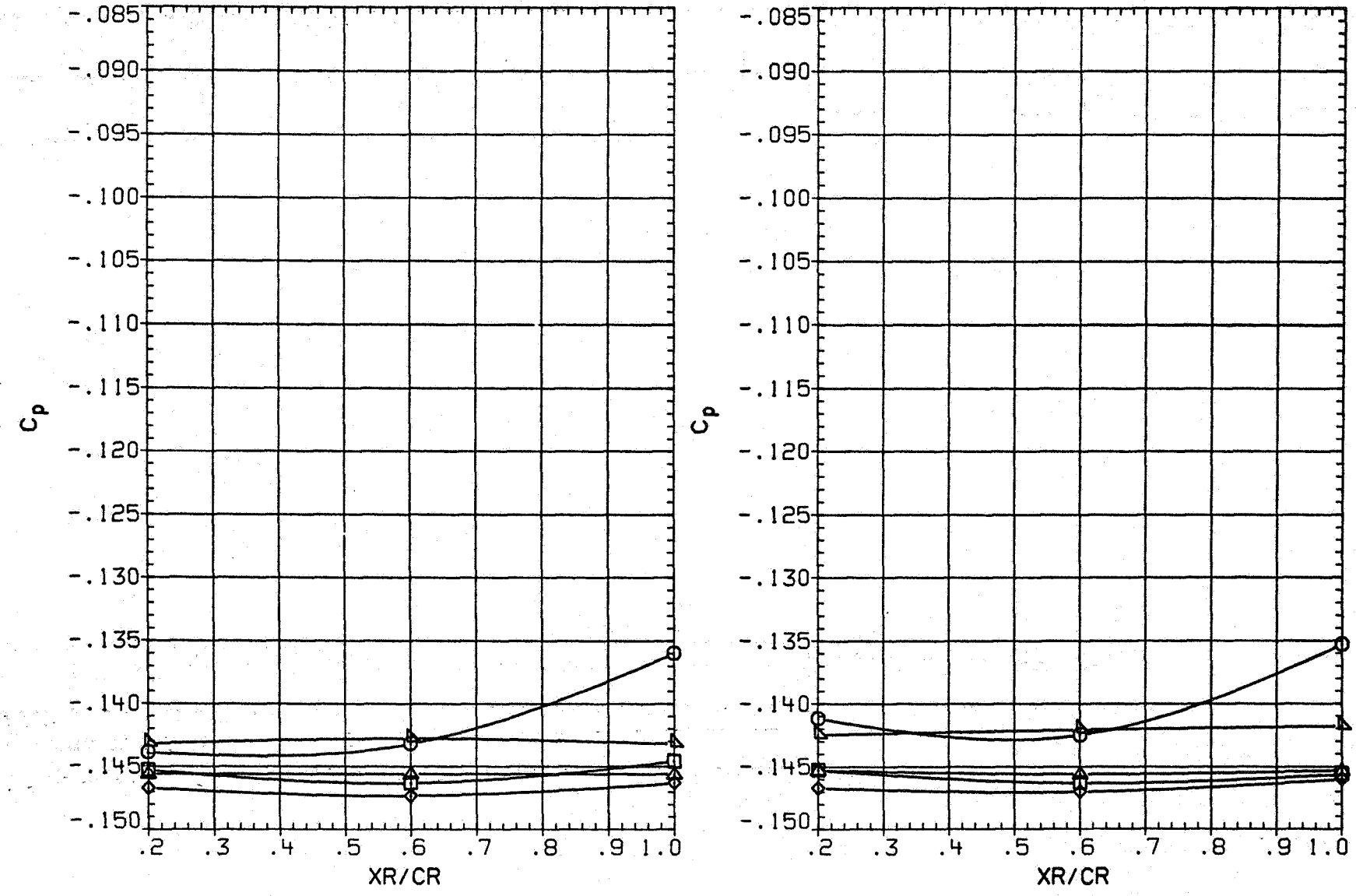


FIG 133 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HX96) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.700	3.000
□	-2.179	.900	
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

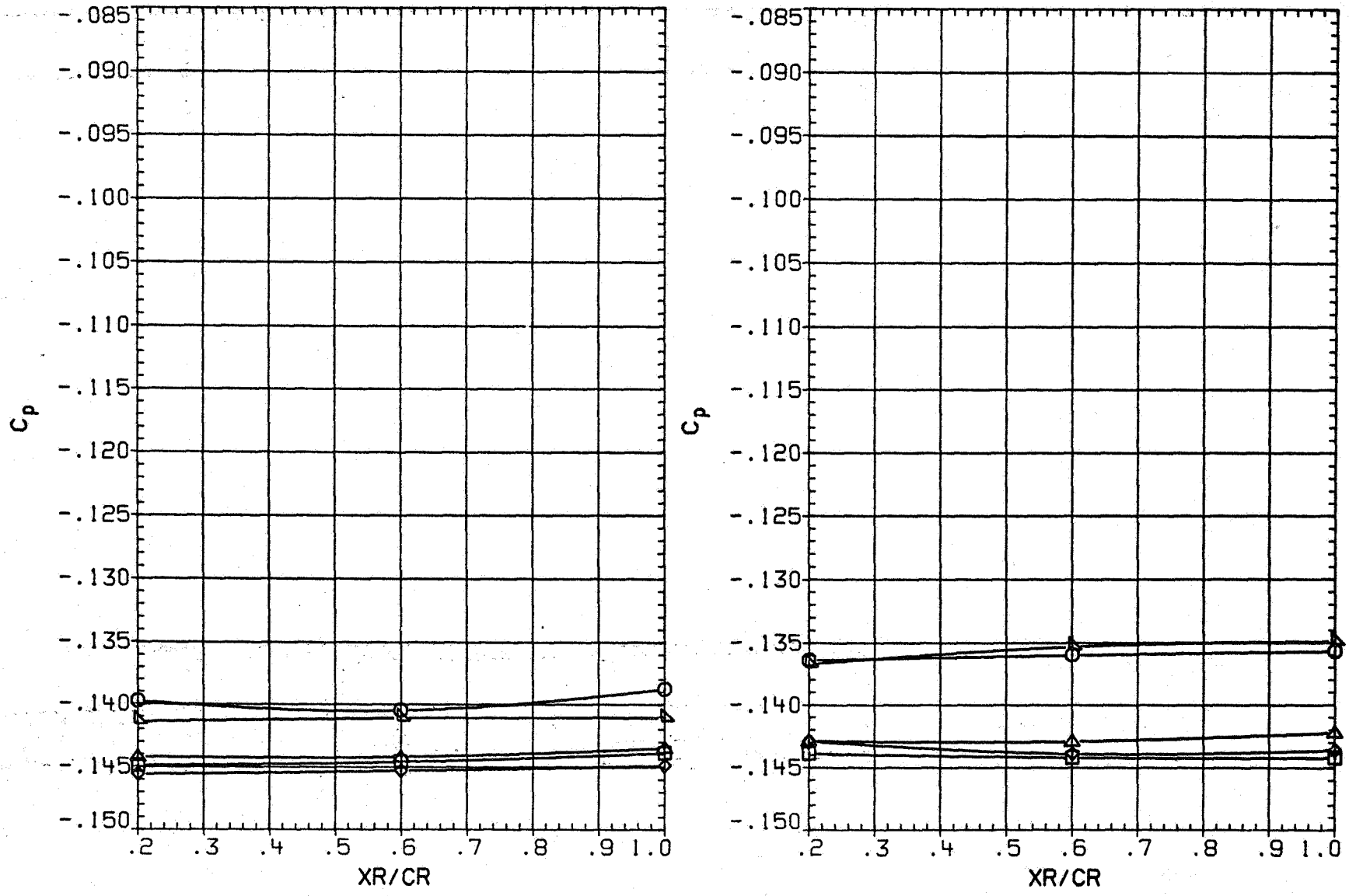


FIG 133 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HX49) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.100	3.000
□	-9.485	.200	
◇	-4.946		
△	.036		
◁	4.978		
▷	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

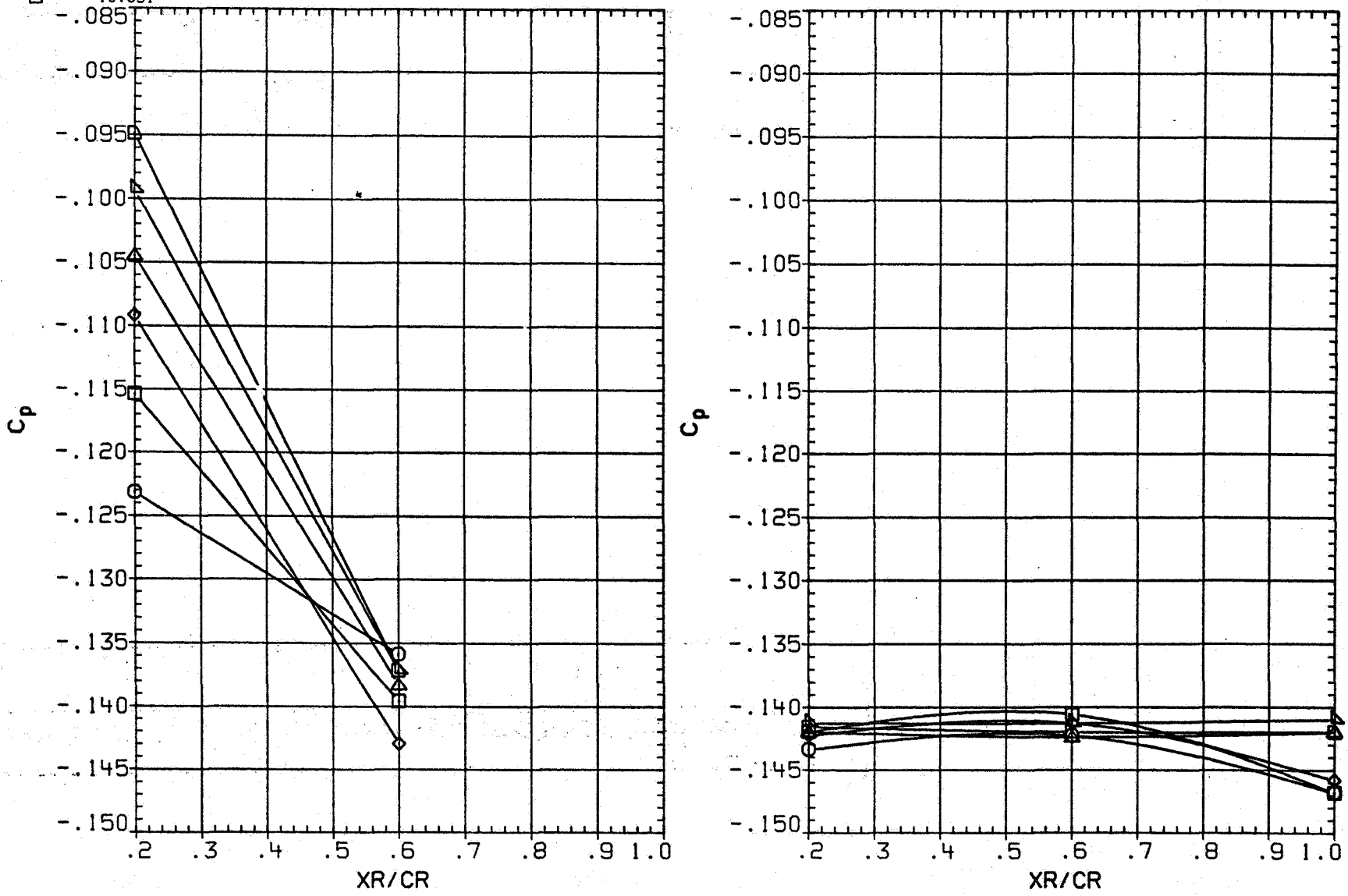


FIG 134 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HX49) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.400	3.000
□	-9.485	.500	
◇	-4.946		
△	.036		
◁	4.978		
▷	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

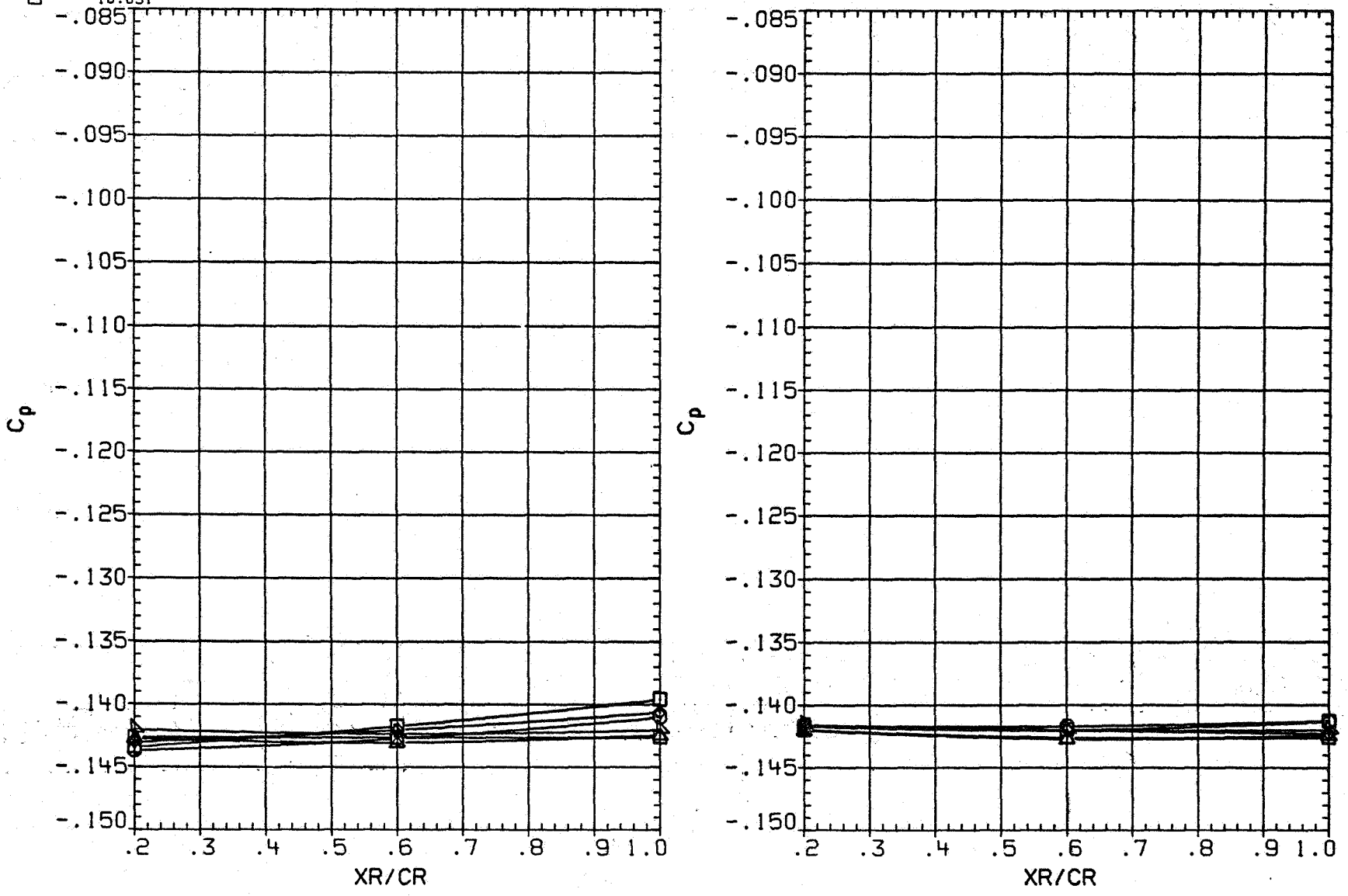


FIG 134 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HX49) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.700	3.000
□	-9.485	.900	
◇	-4.946		
△	.036		
◁	4.978		
▷	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

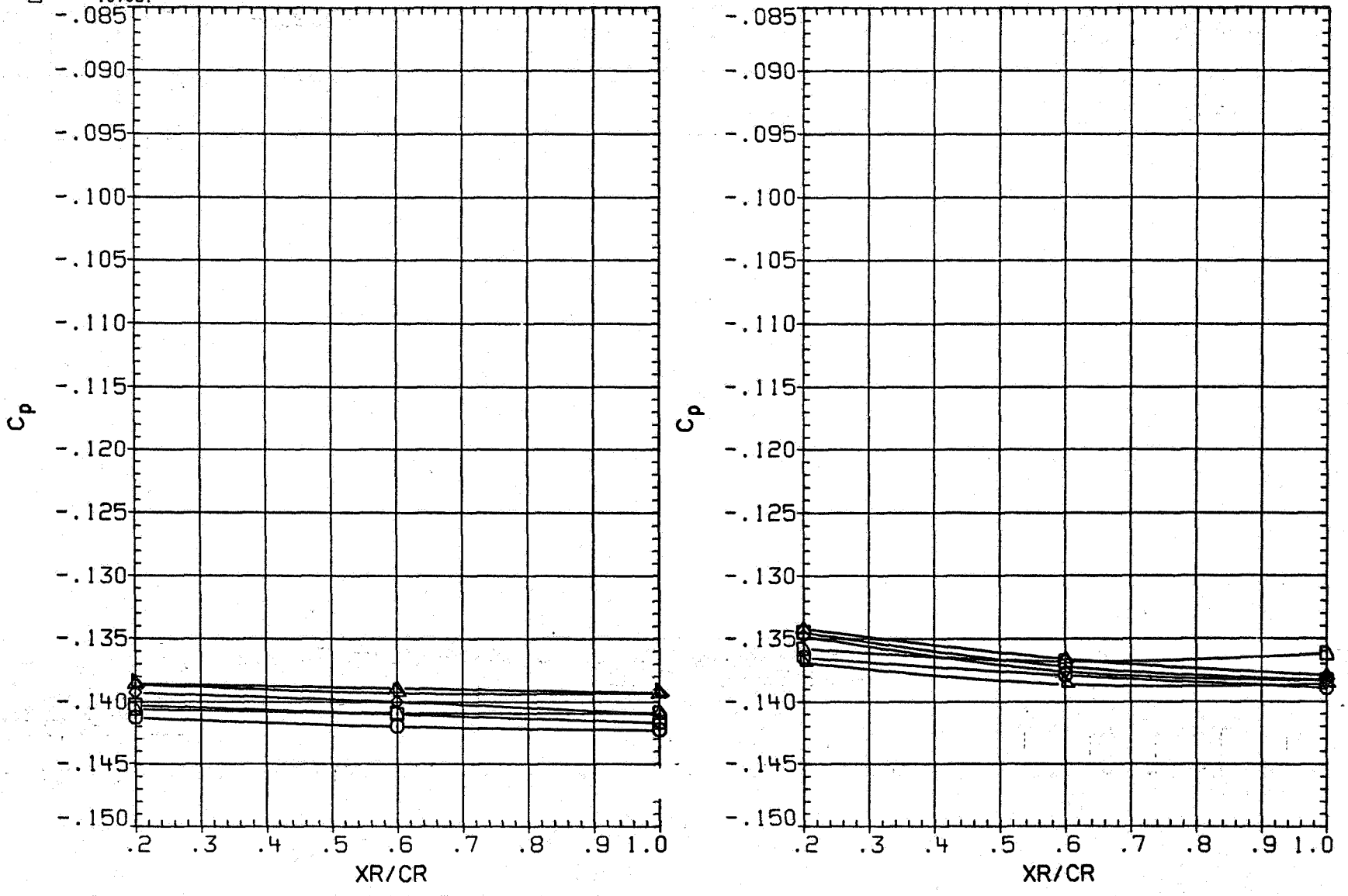


FIG 134 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HX70) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.100	3.000
□	-9.494	.200	
◇	-4.936		
◁	.009		
△	5.008		
▱	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

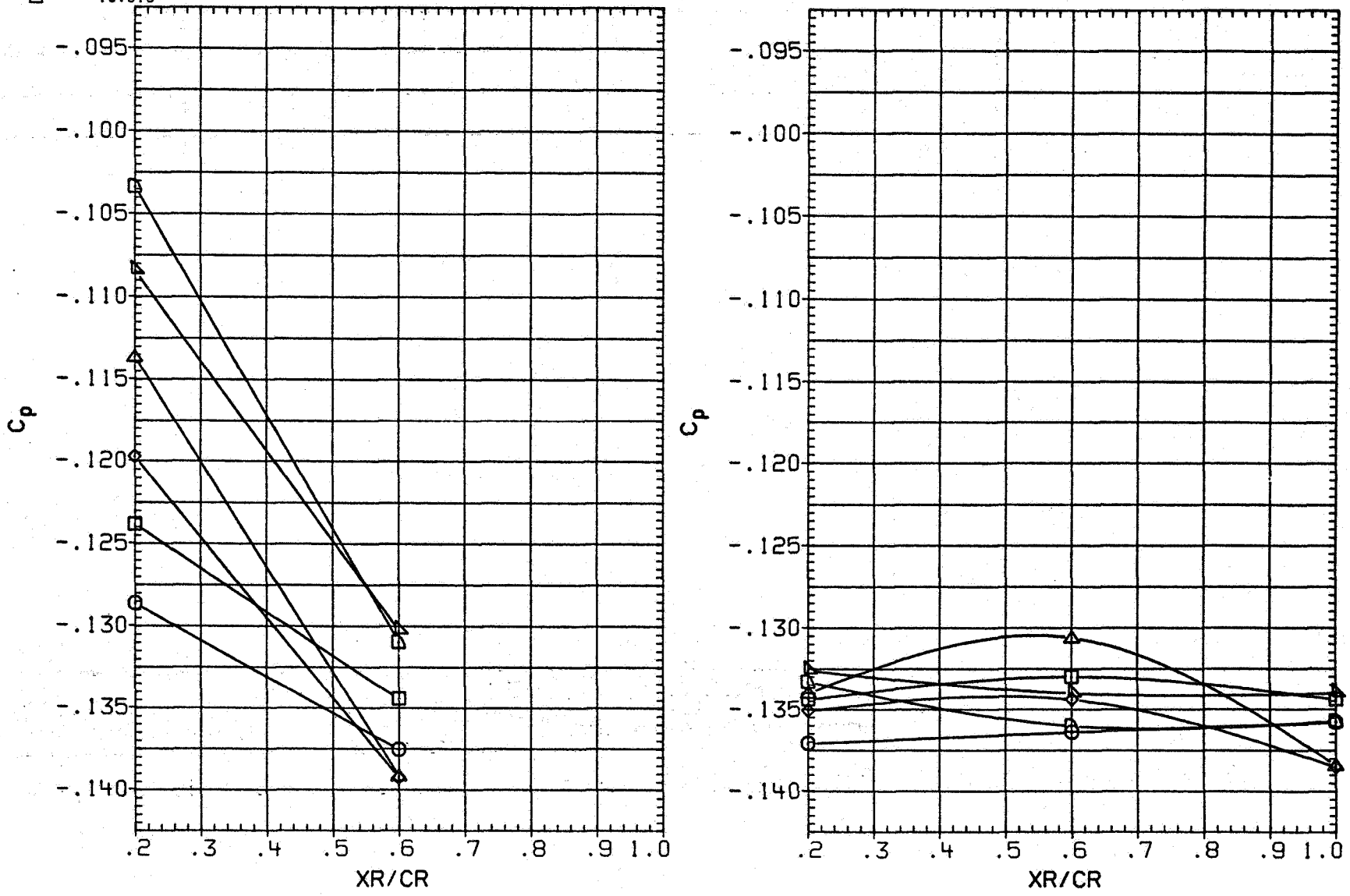


FIG 135 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 25

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.400	3.000
□	-9.494	.500	
◇	-4.936		
△	.009		
◁	5.008		
▷	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

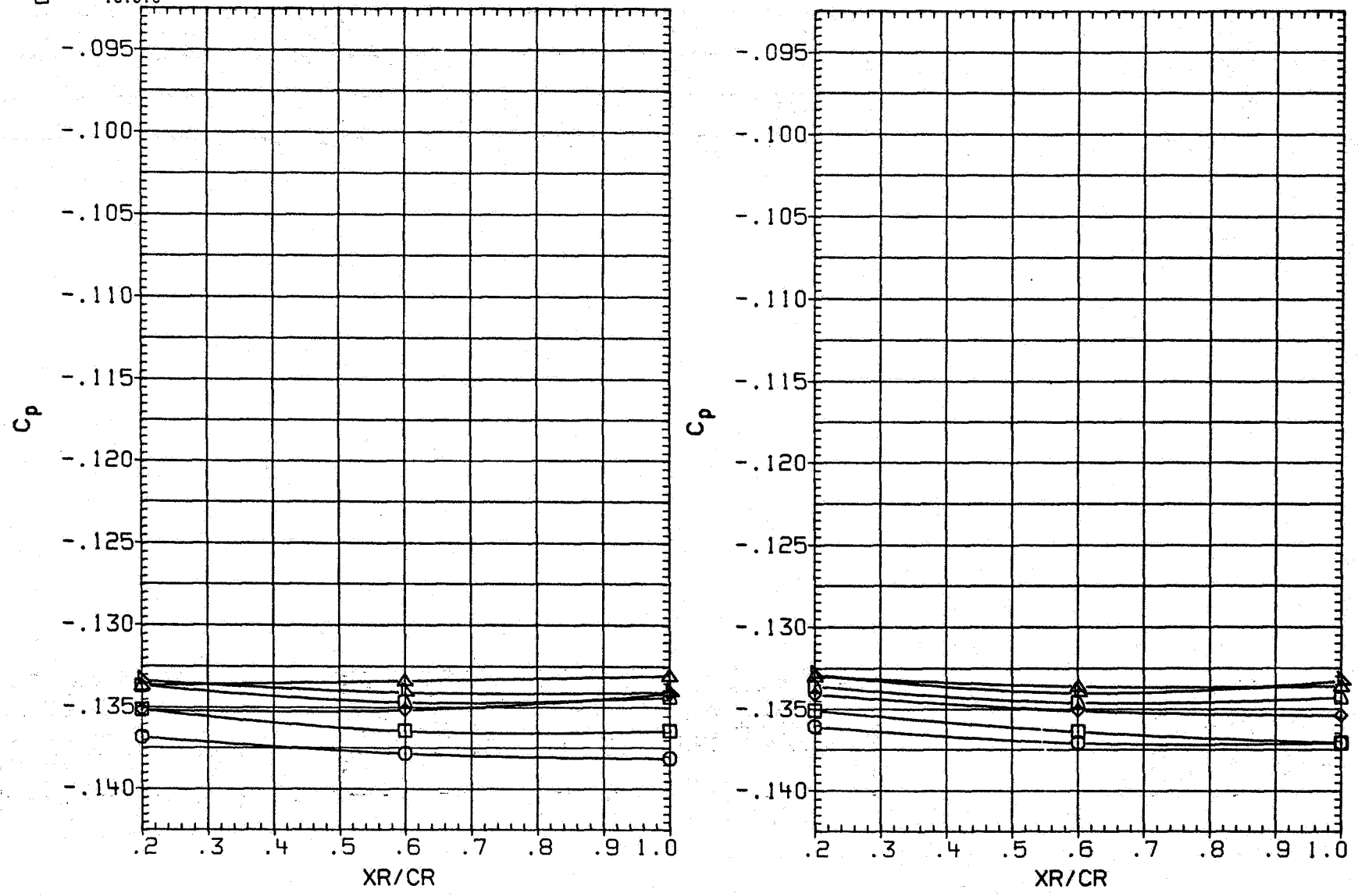


FIG 135 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HX70) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.700	3.000
□	-9.494	.900	
◇	-4.936		
◁	.009		
△	5.008		
▷	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

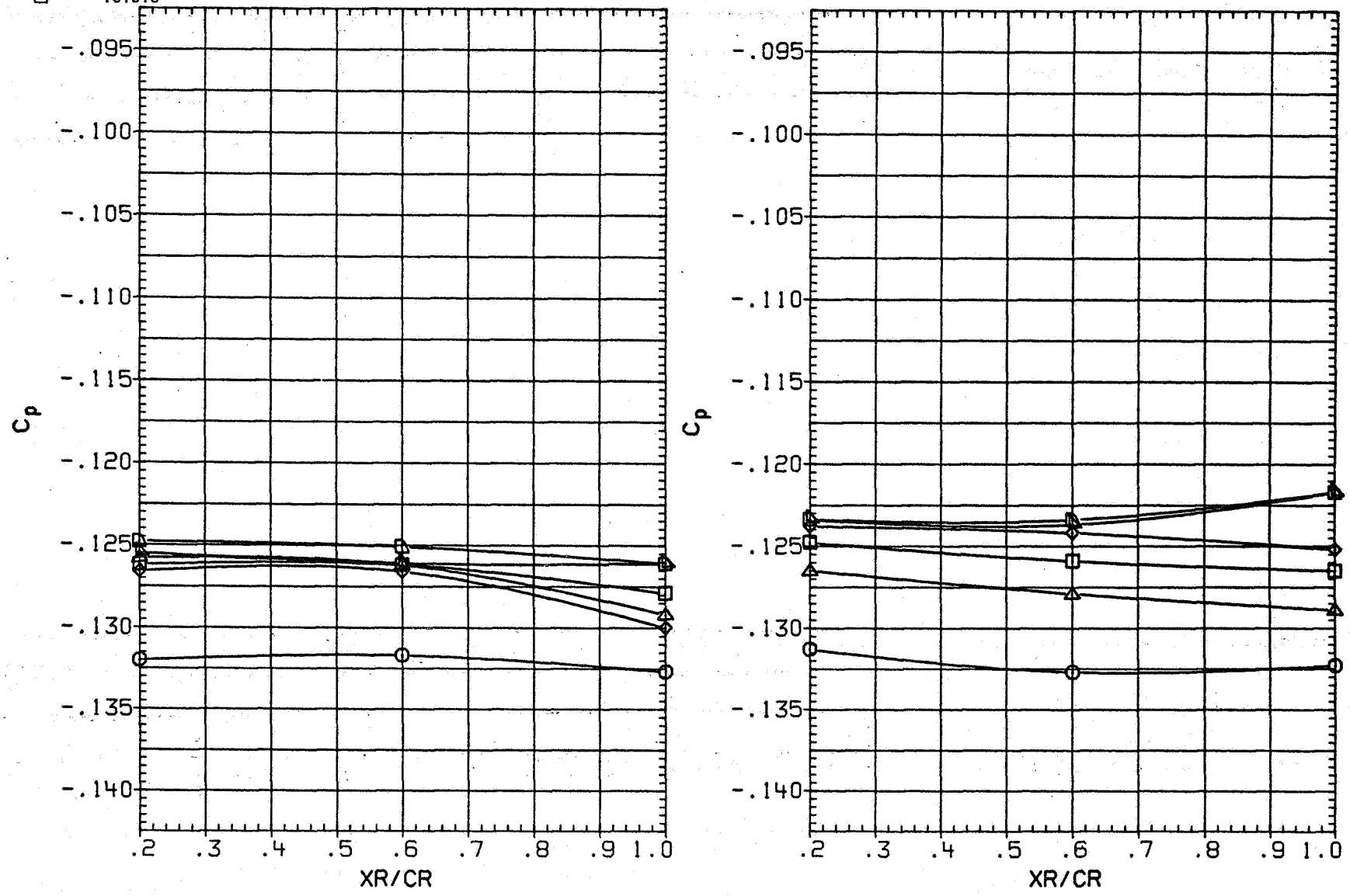


FIG 135 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HX89) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.100	3.000
□	-9.485	.200	
◇	-4.946		
△	.018		
◁	4.998		
▷	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

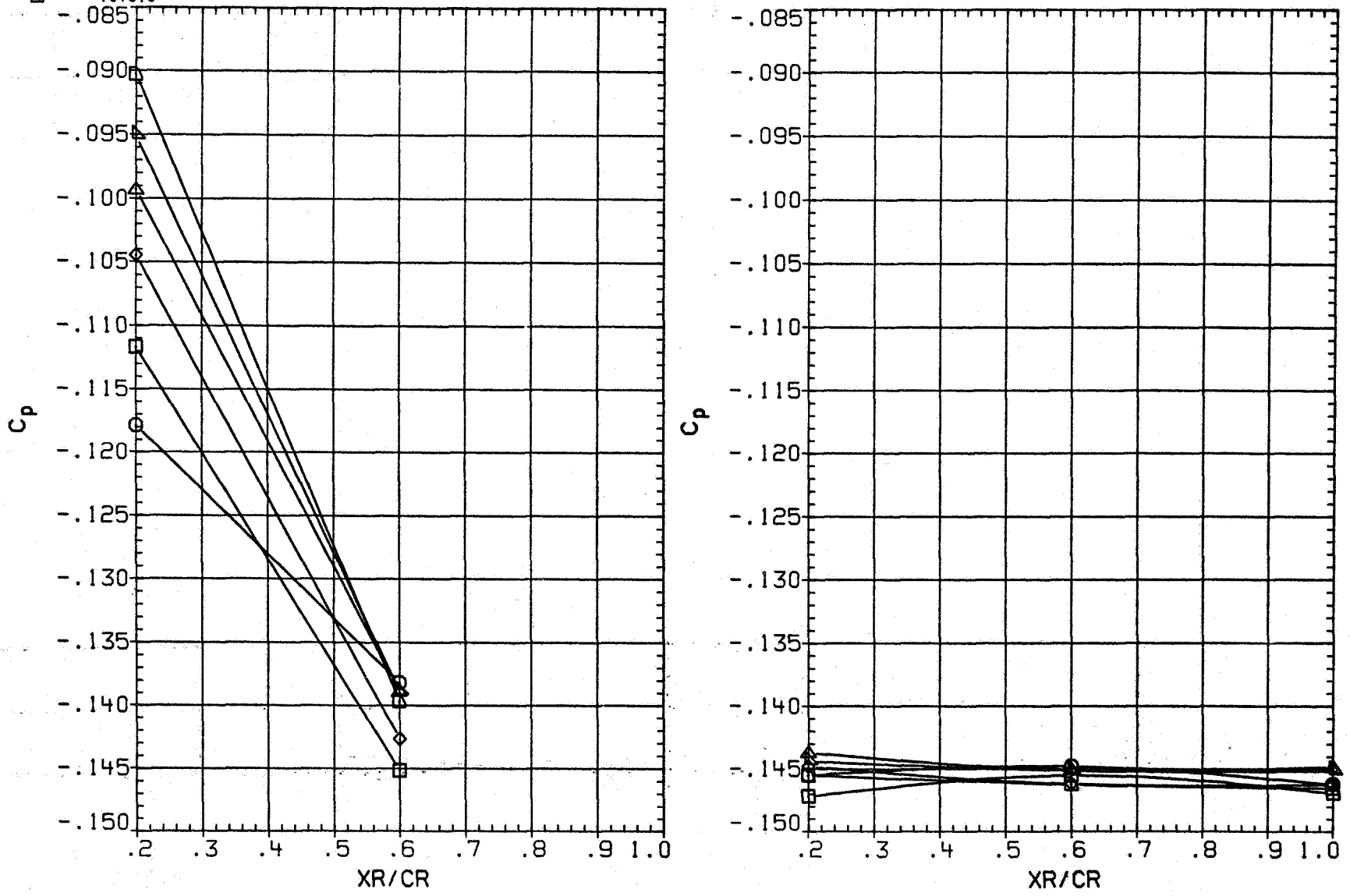


FIG 136 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HX89) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.400	3.000
□	-9.485	.500	
◇	-4.946		
◁	.018		
△	4.998		
▷	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

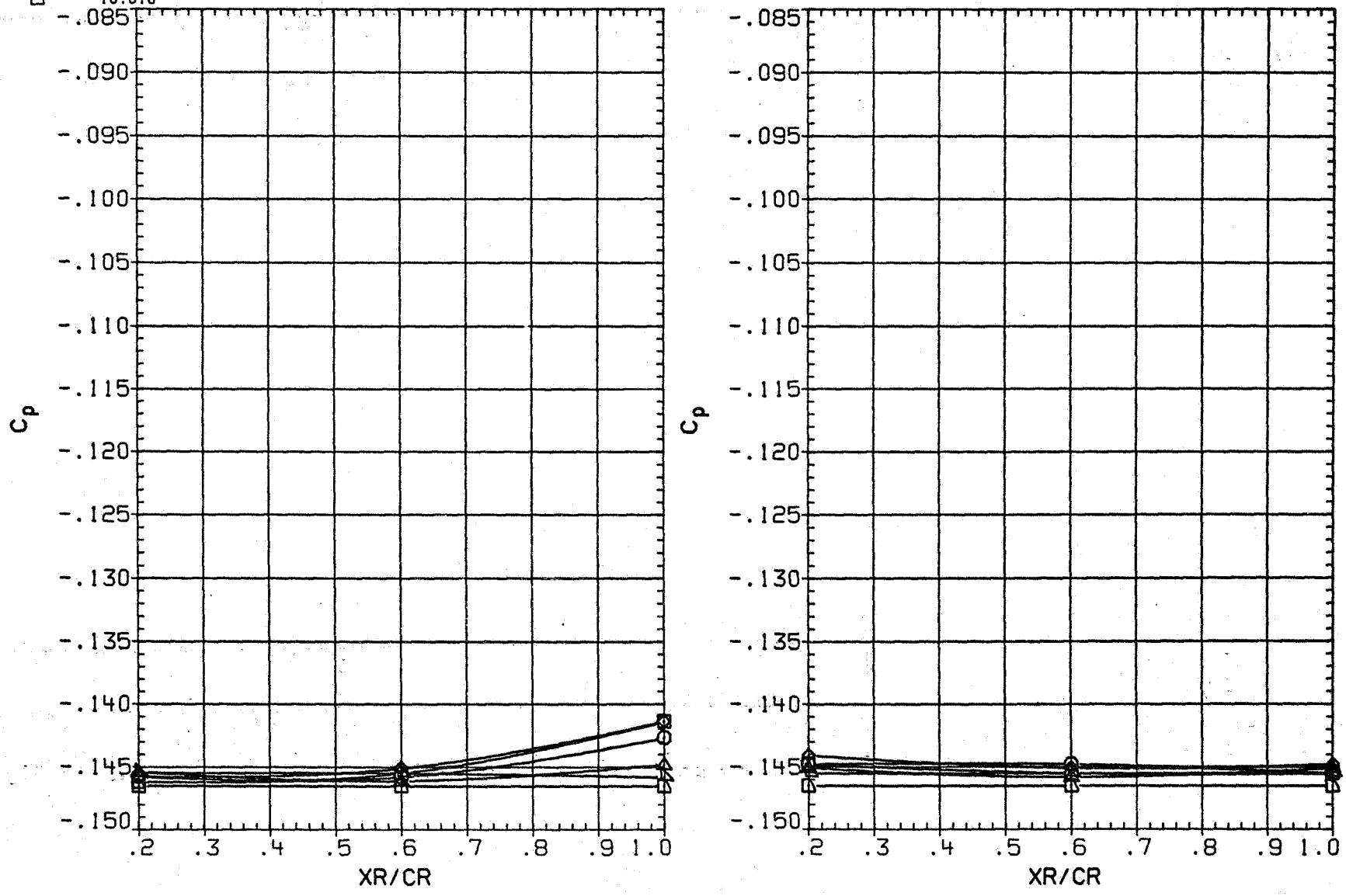


FIG 136 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HX89) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.700	3.000
□	-9.485	.900	
◇	-4.946		
△	.018		
◁	4.998		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

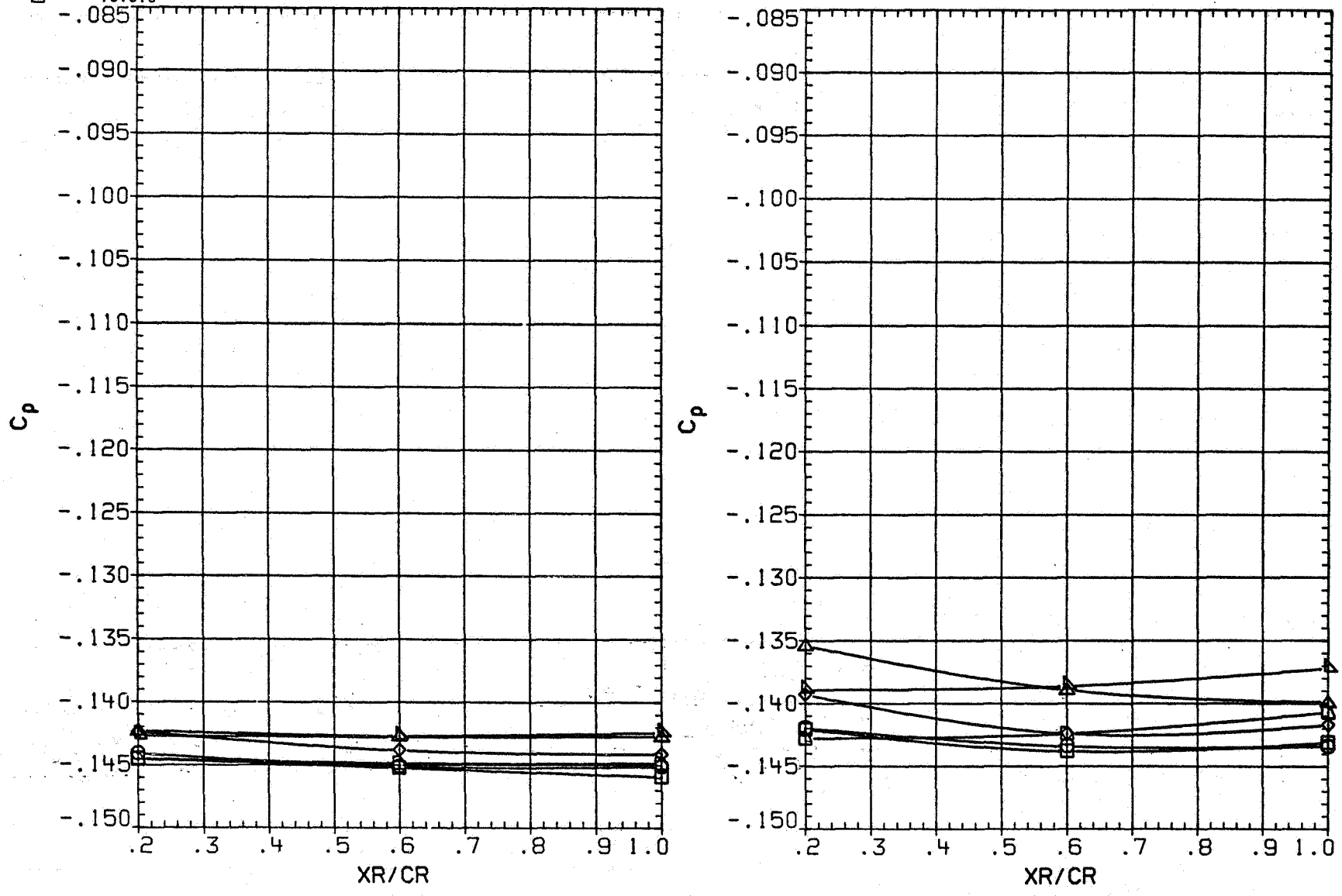


FIG 136 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 70

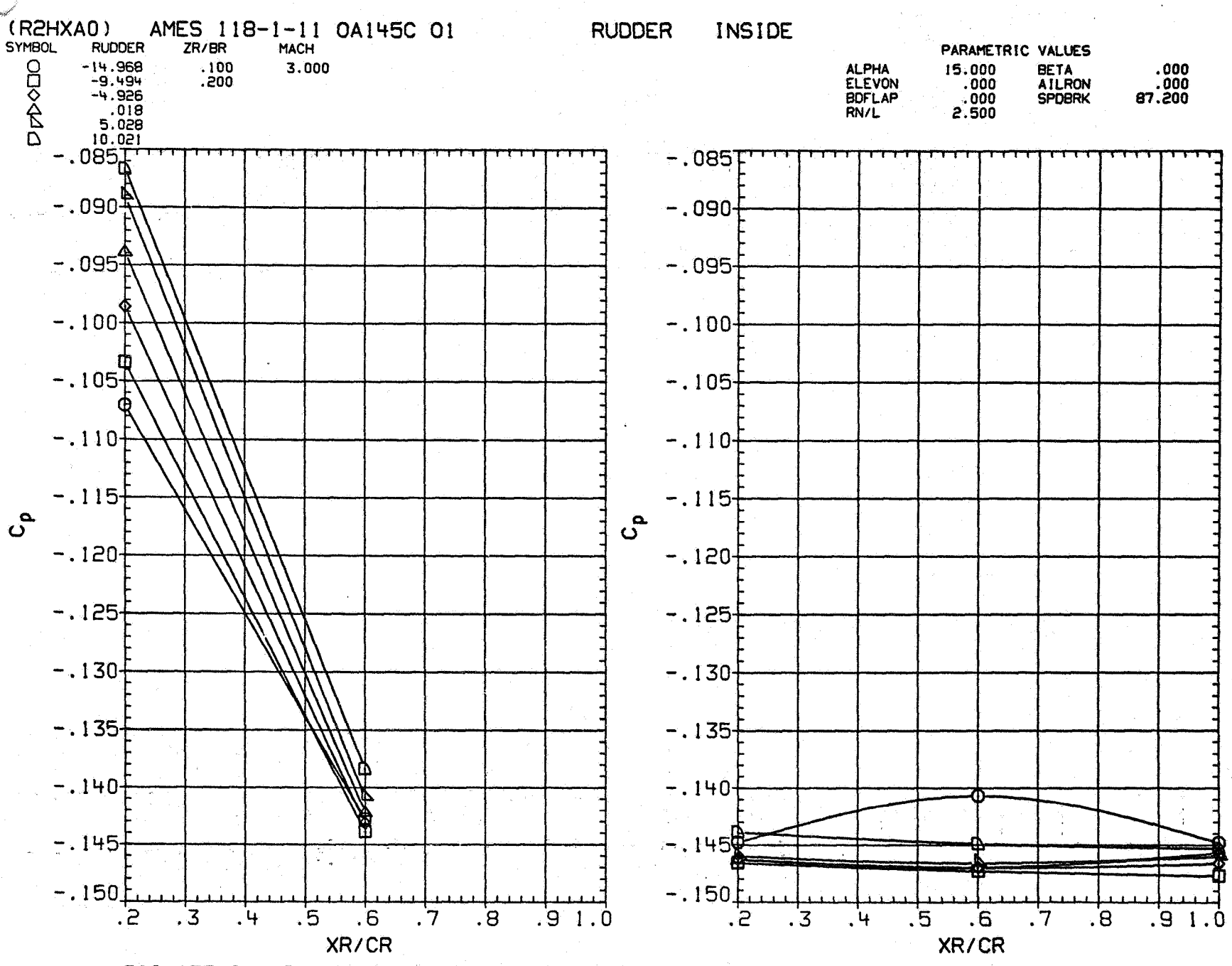


FIG 137 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

(R2HXA0) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.968	.400	3.000
□	-9.494	.500	
◇	-4.926		
△	.018		
▽	5.028		
D	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

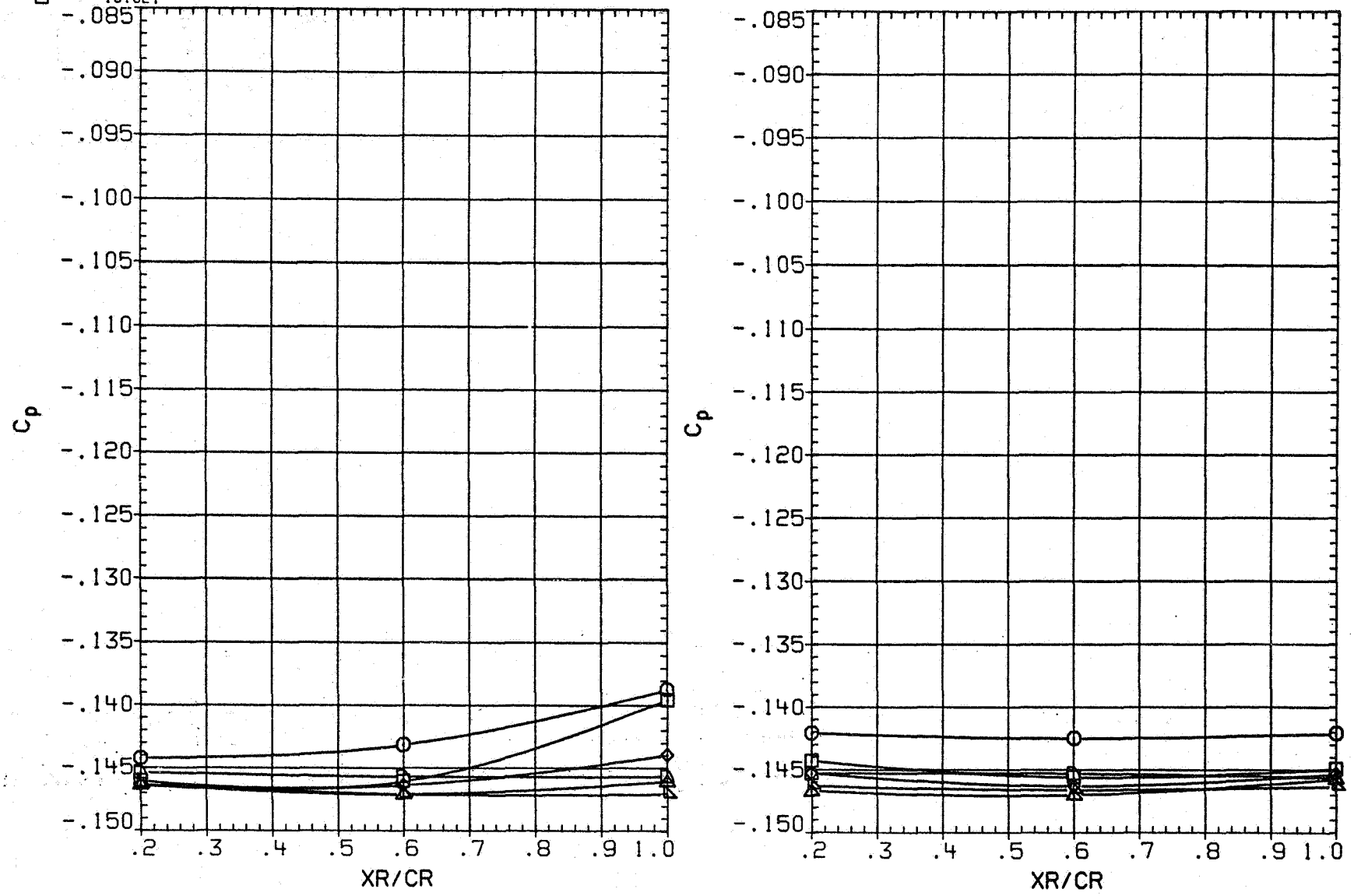


FIG 137 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.968	.700	3.000
□	-9.494	.900	
◇	-4.926		
△	.018		
◁	5.028		
▷	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

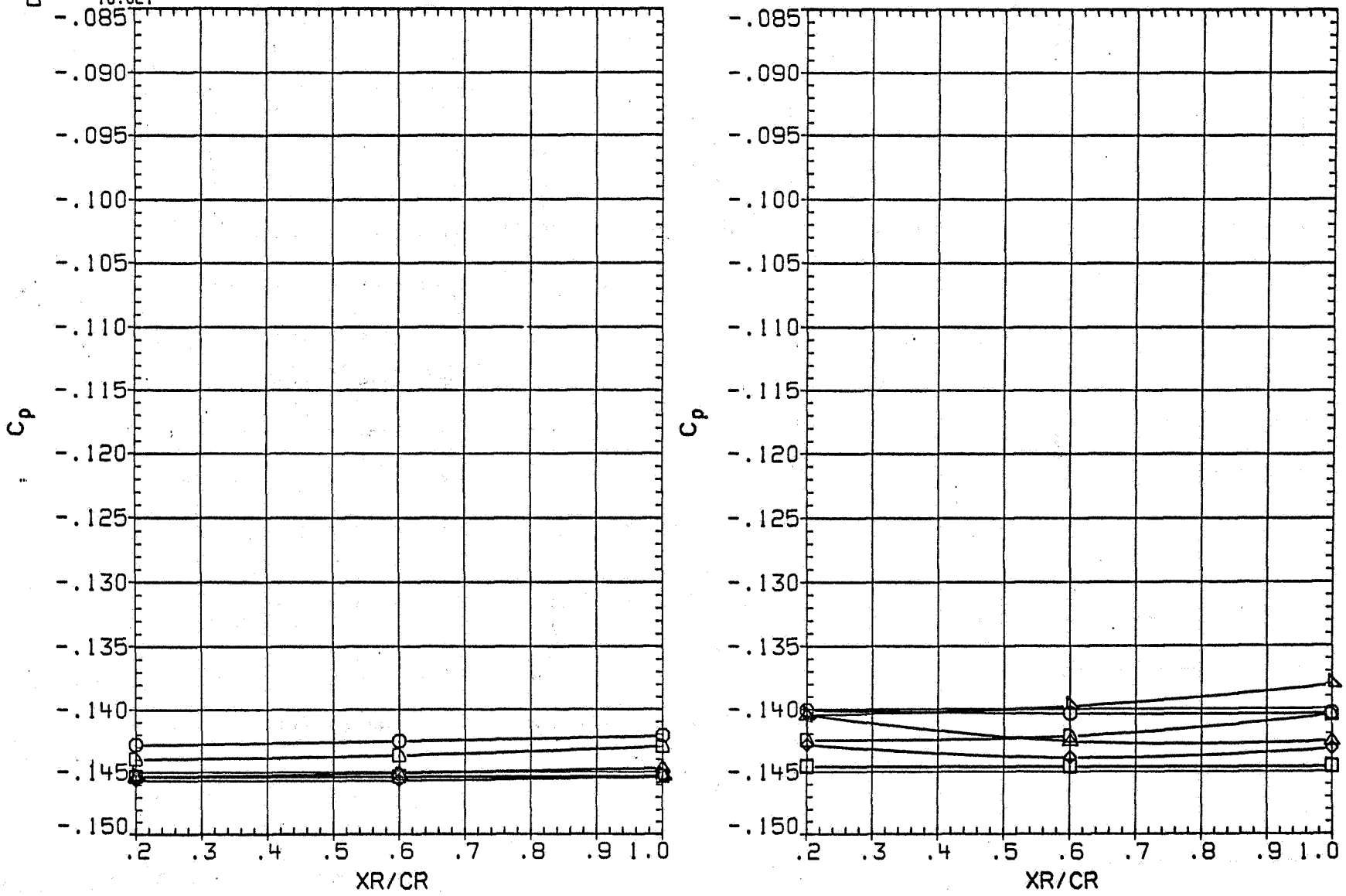


FIG 137 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HX64)	○	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	25.000		.000	2.500
(R2HX76)	□	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	40.000		.000	2.500
(R2HX02)	◇	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	55.000		.000	2.500
(R2HX85)	△	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	70.000		.000	2.500
(R2HX94)	▷	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	87.200		.000	2.500

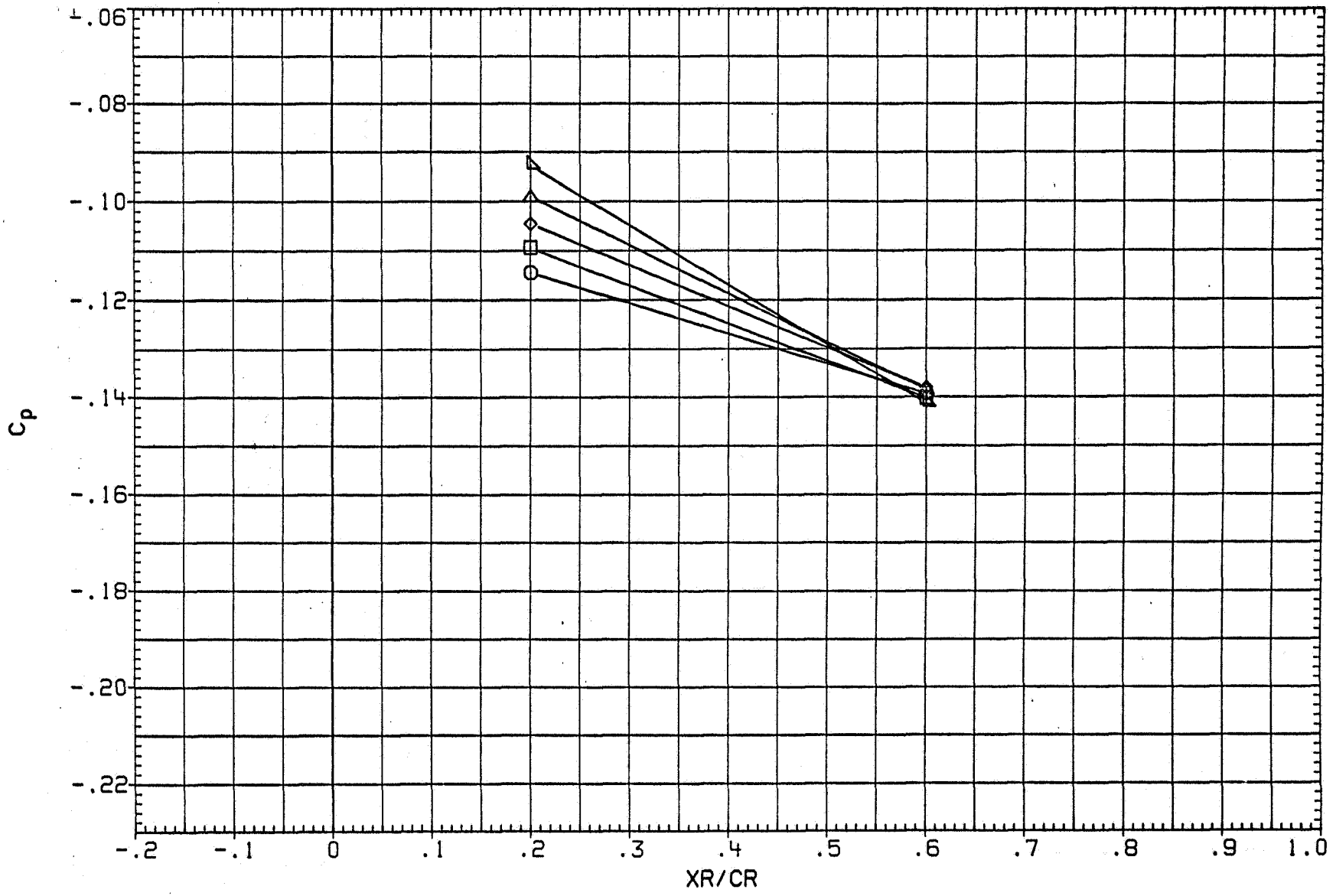


FIG 138 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .100

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HX64)	○	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	25.000		.000	2.500
(R2HX76)	□	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	40.000		.000	2.500
(R2HX02)	◇	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	55.000		.000	2.500
(R2HX85)	△	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	70.000		.000	2.500
(R2HX94)	◁	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	87.200		.000	2.500

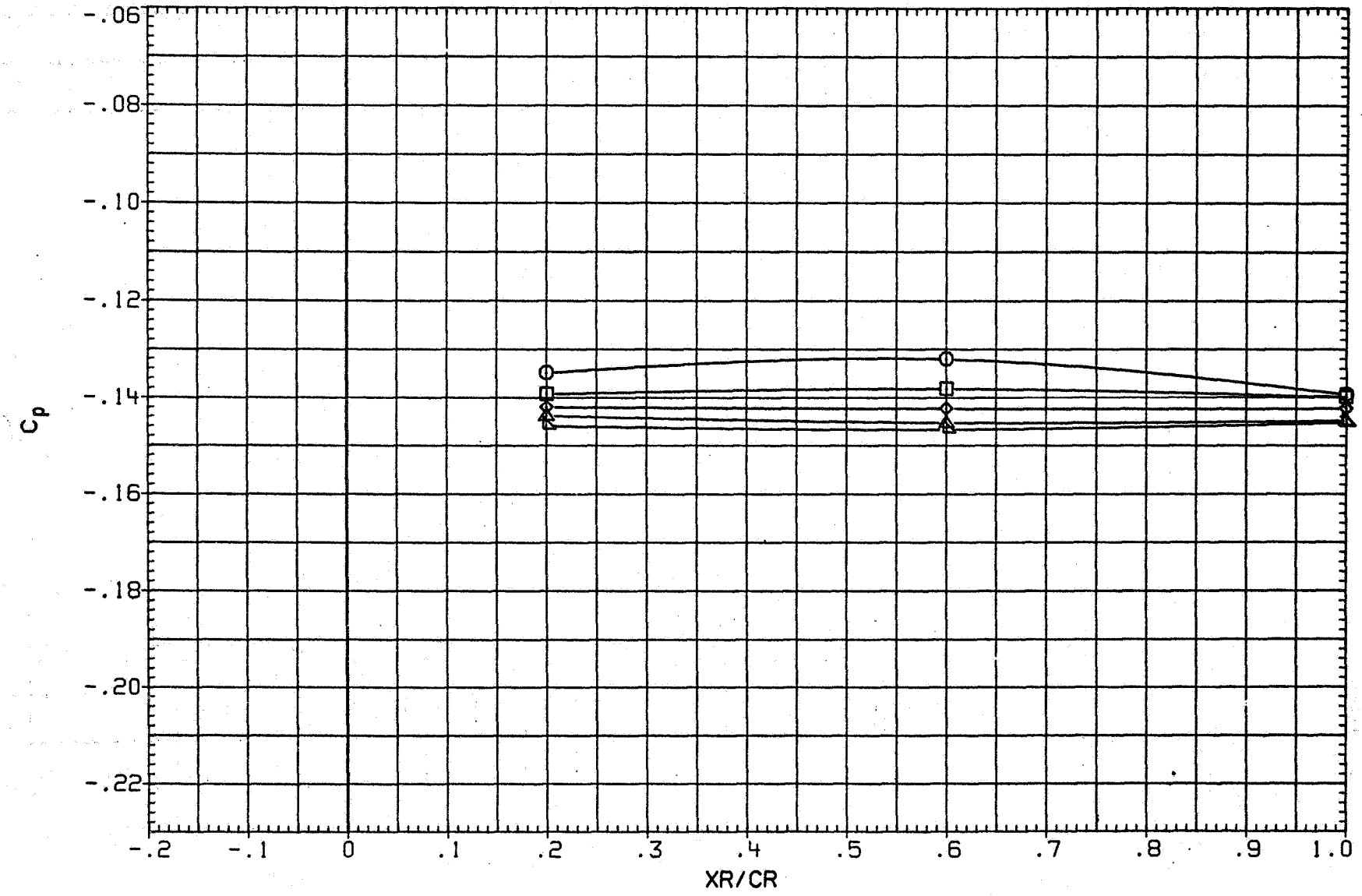


FIG 138 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HX64)	○	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	25.000		.000	2.500
(R2HX76)	□	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	40.000		.000	2.500
(R2HX02)	◇	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	55.000		.000	2.500
(R2HX85)	△	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	70.000		.000	2.500
(R2HX94)	◺	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	87.200		.000	2.500

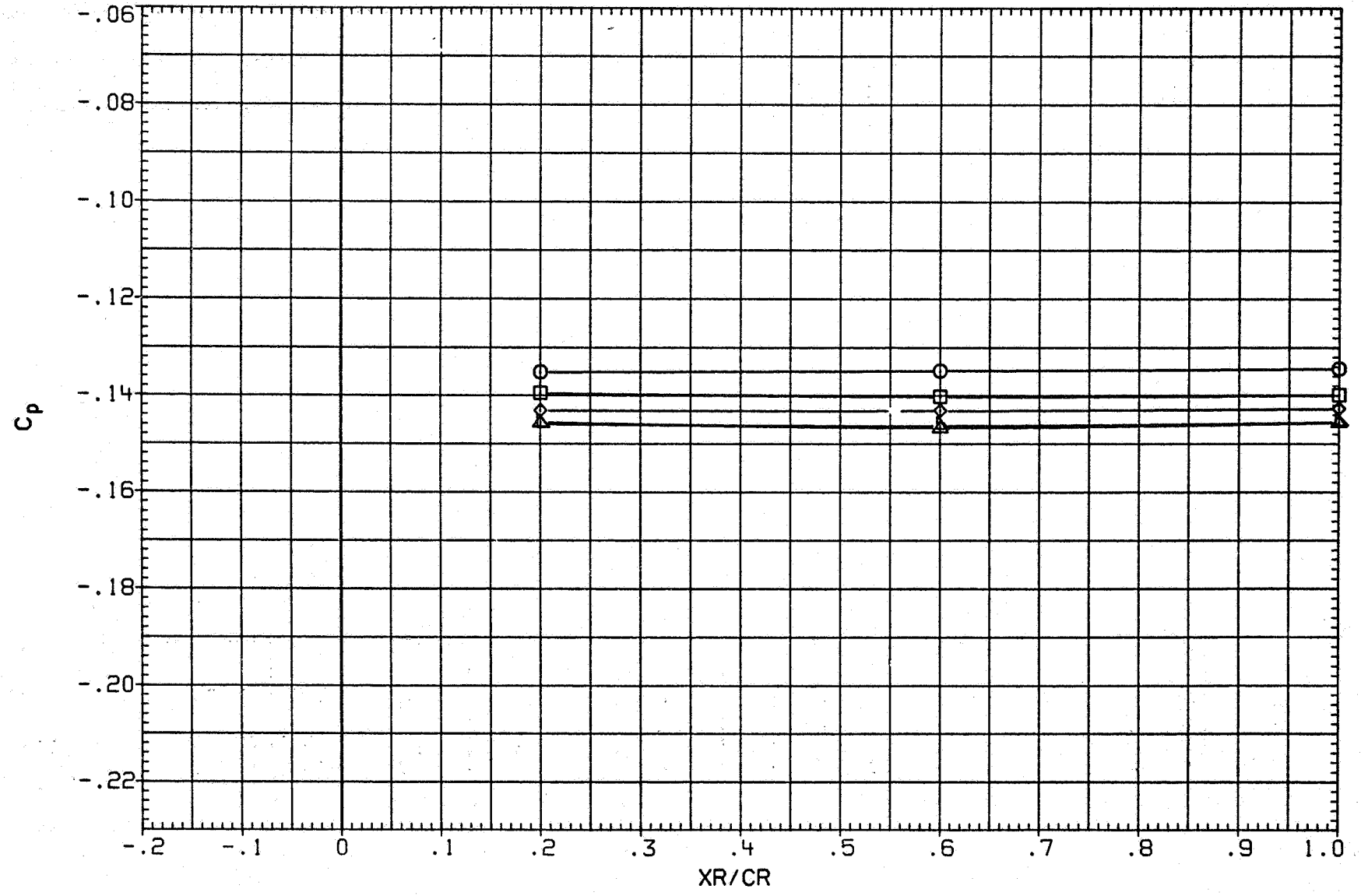


FIG 138 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HX64)	○	AMES 118-1-11 OA145C 01	RUDDER	INSIDE	25.000		.000	2.500
(R2HX76)	□	AMES 118-1-11 OA145C 01	RUDDER	INSIDE	40.000		.000	2.500
(R2HX02)	◇	AMES 118-1-11 OA145C 01	RUDDER	INSIDE	55.000		.000	2.500
(R2HX85)	△	AMES 118-1-11 OA145C 01	RUDDER	INSIDE	70.000		.000	2.500
(R2HX94)	◁	AMES 118-1-11 OA145C 01	RUDDER	INSIDE	87.200		.000	2.500

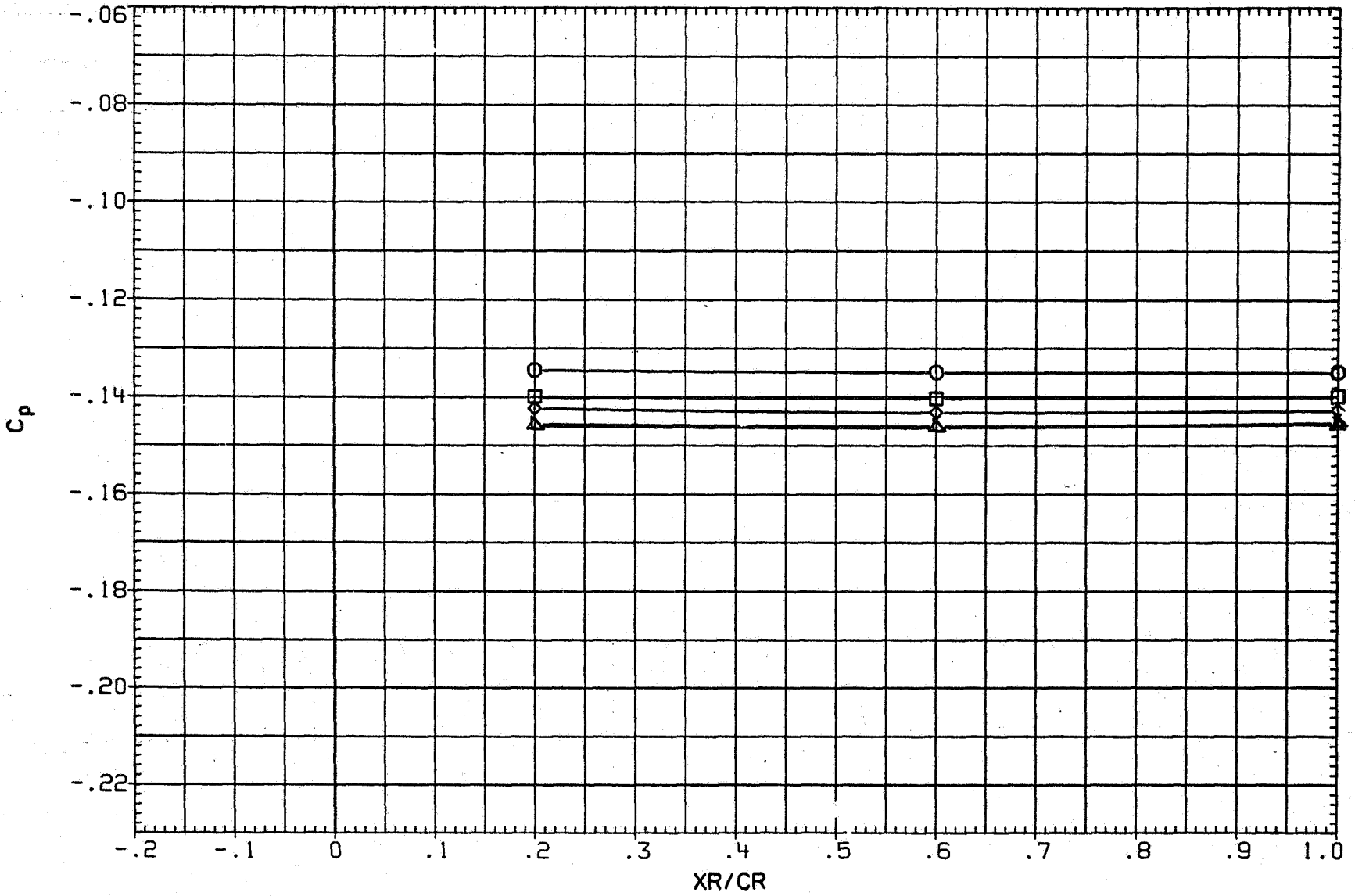


FIG 138 OA145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HX64)	○	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	25.000		.000	2.500
(R2HX76)	□	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	40.000		.000	2.500
(R2HX02)	◇	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	55.000		.000	2.500
(R2HX85)	△	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	70.000		.000	2.500
(R2HX94)	▷	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	87.200		.000	2.500

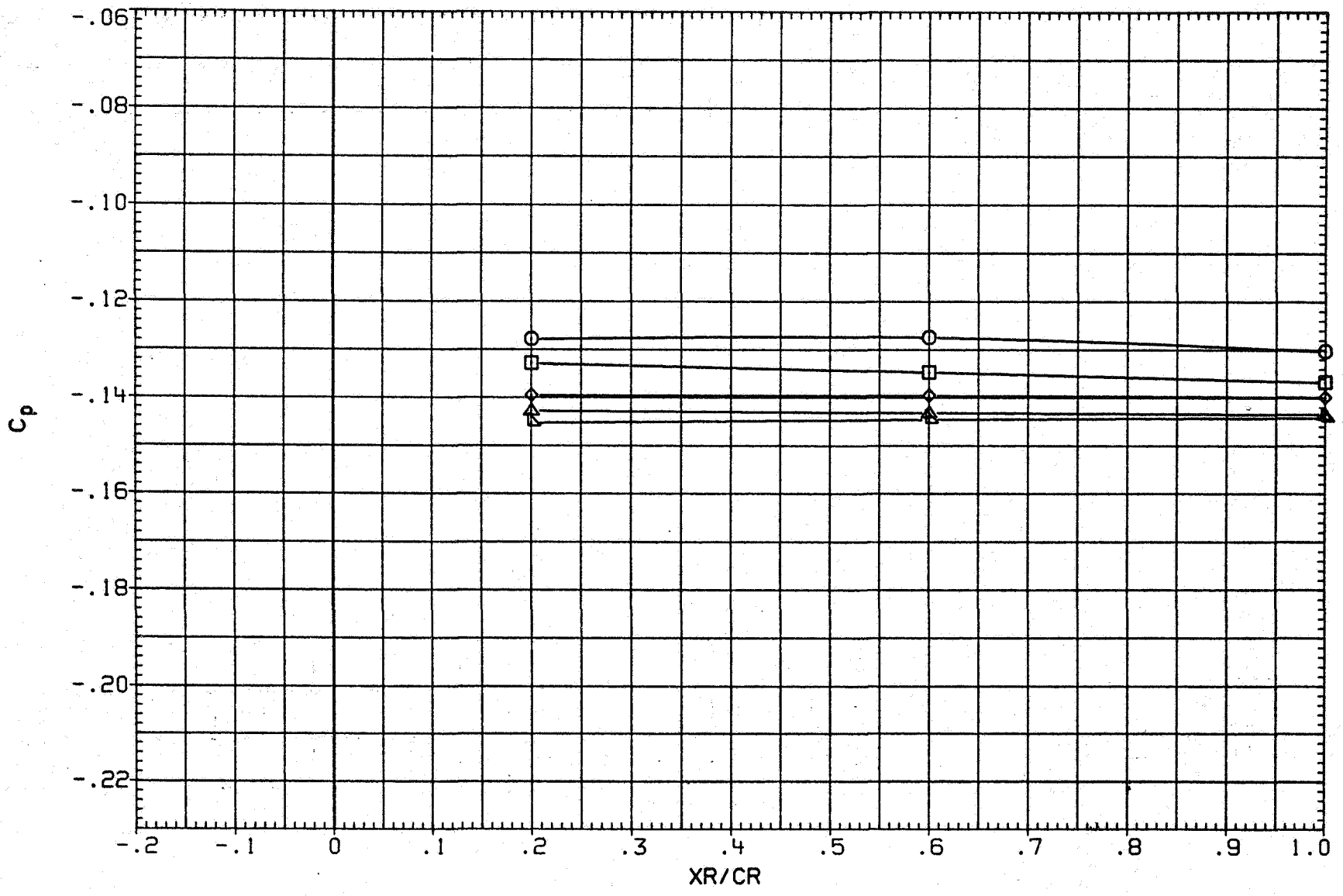


FIG 138 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HX64)	○	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	25.000		.000	2.500
(R2HX76)	□	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	40.000		.000	2.500
(R2HX02)	◇	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	55.000		.000	2.500
(R2HX85)	△	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	70.000		.000	2.500
(R2HX94)	▷	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	87.200		.000	2.500

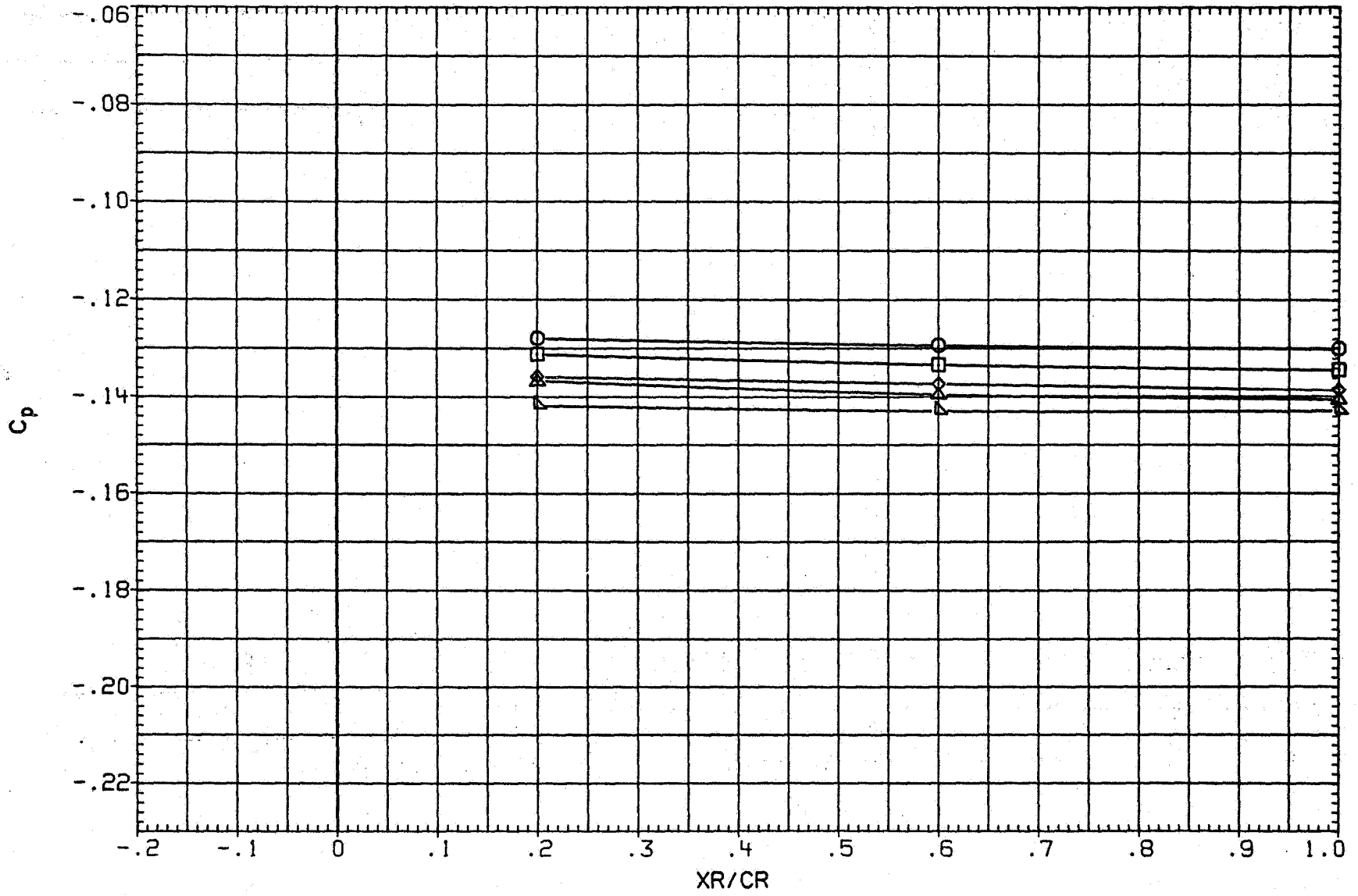


FIG 138 0A145C SPEED BRAKE CP VS. XR/CR
INNER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .900

(R2HW02) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.100	3.001
□	5.887		
◇	9.949		
△	15.195		
◪	20.260		
◺	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

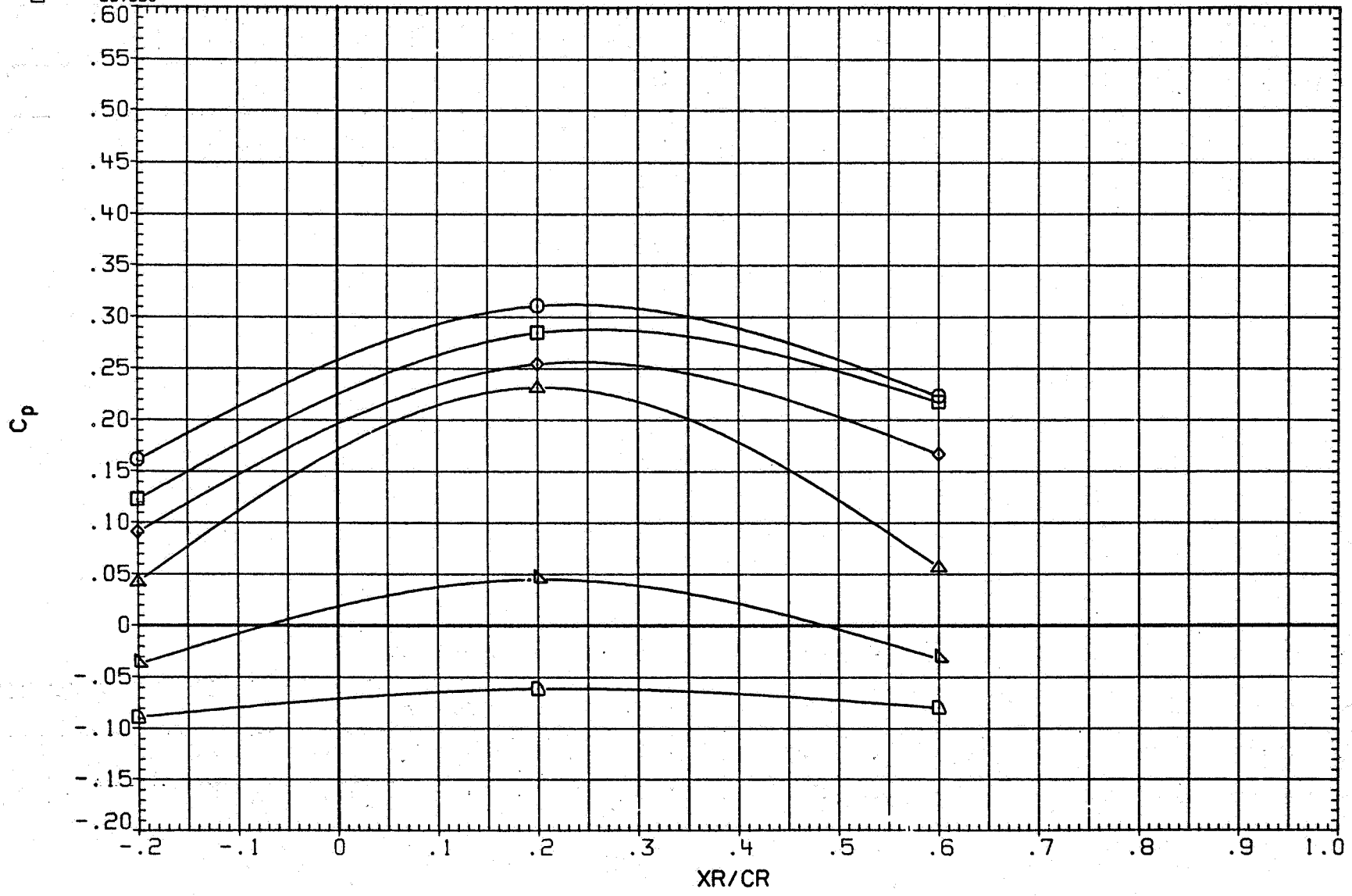


FIG 139 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW02) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.200	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

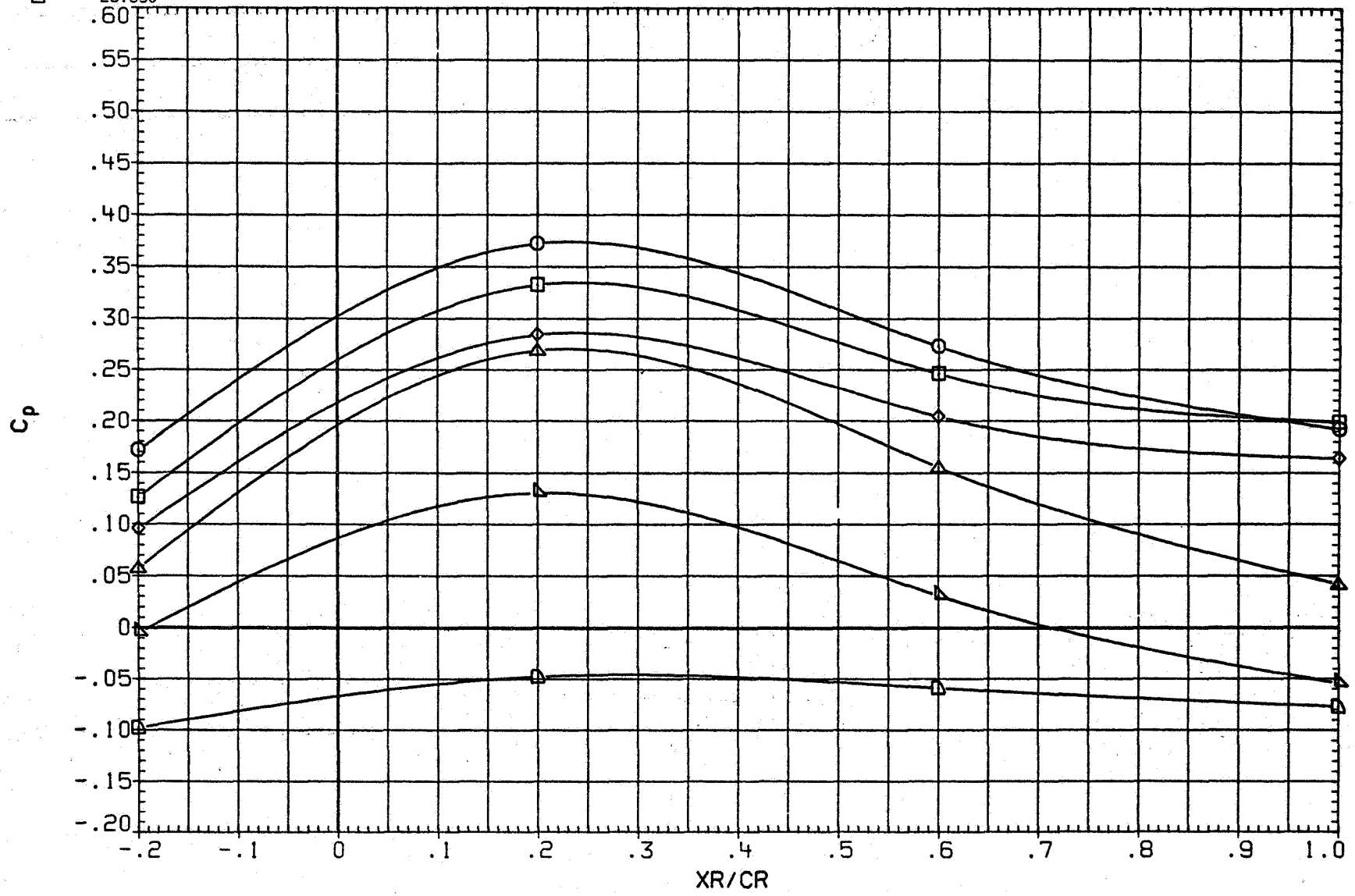


FIG 139 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW02) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.300	3.001
□	5.887		
◇	9.949		
△	15.195		
◸	20.260		
◻	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

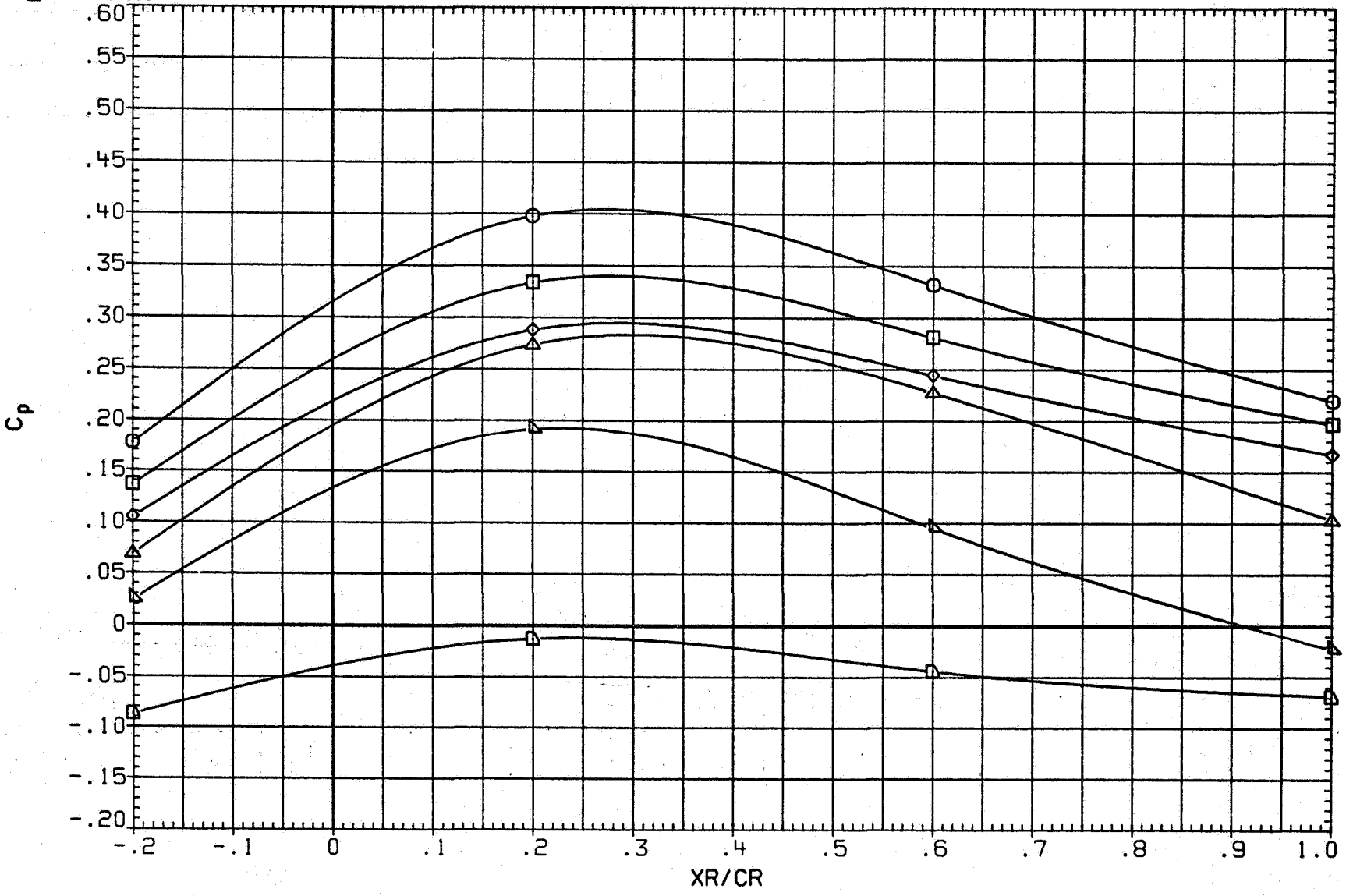


FIG 139 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW02) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.400	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
D	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

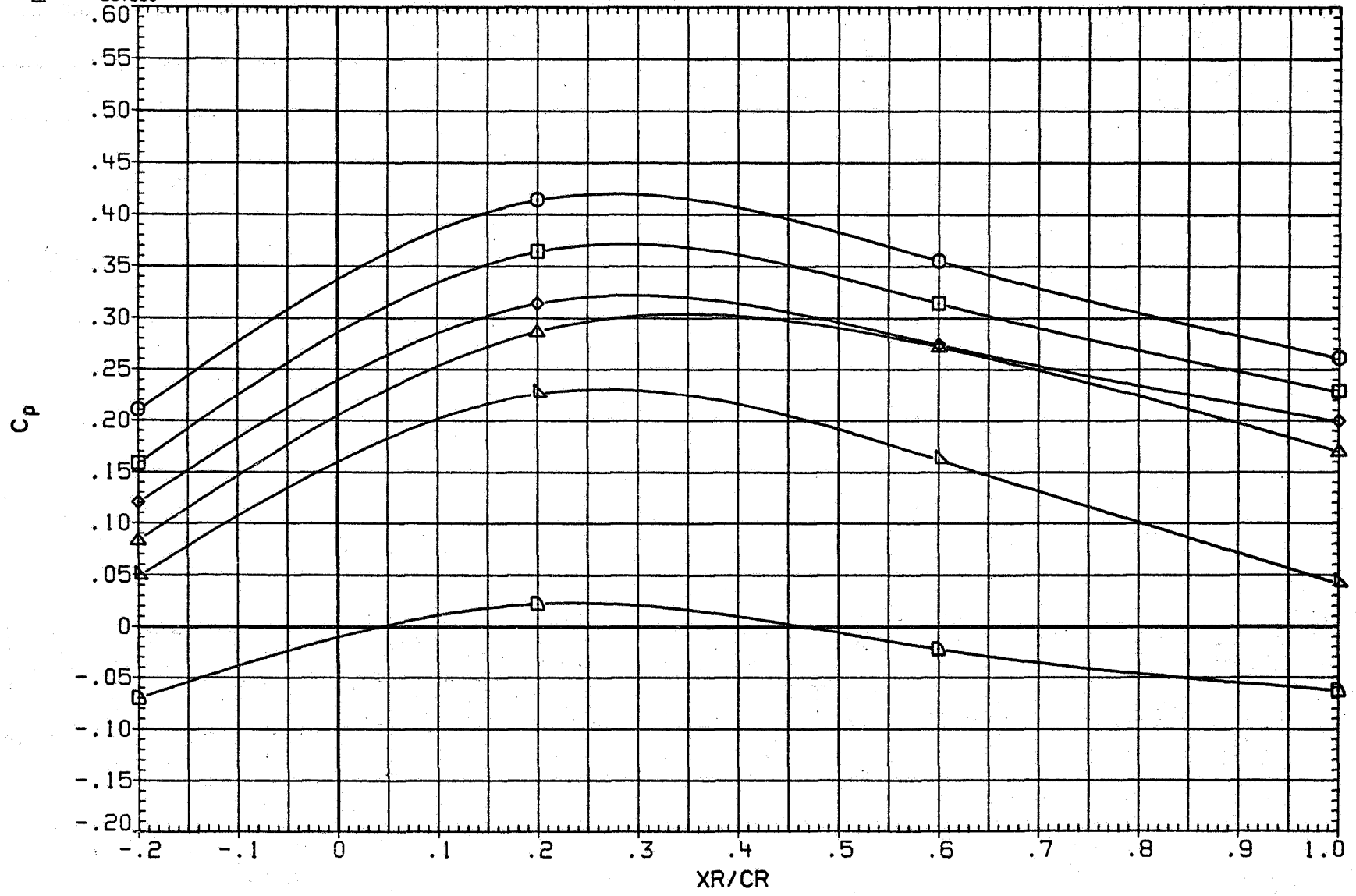


FIG 139 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW02) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.500	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

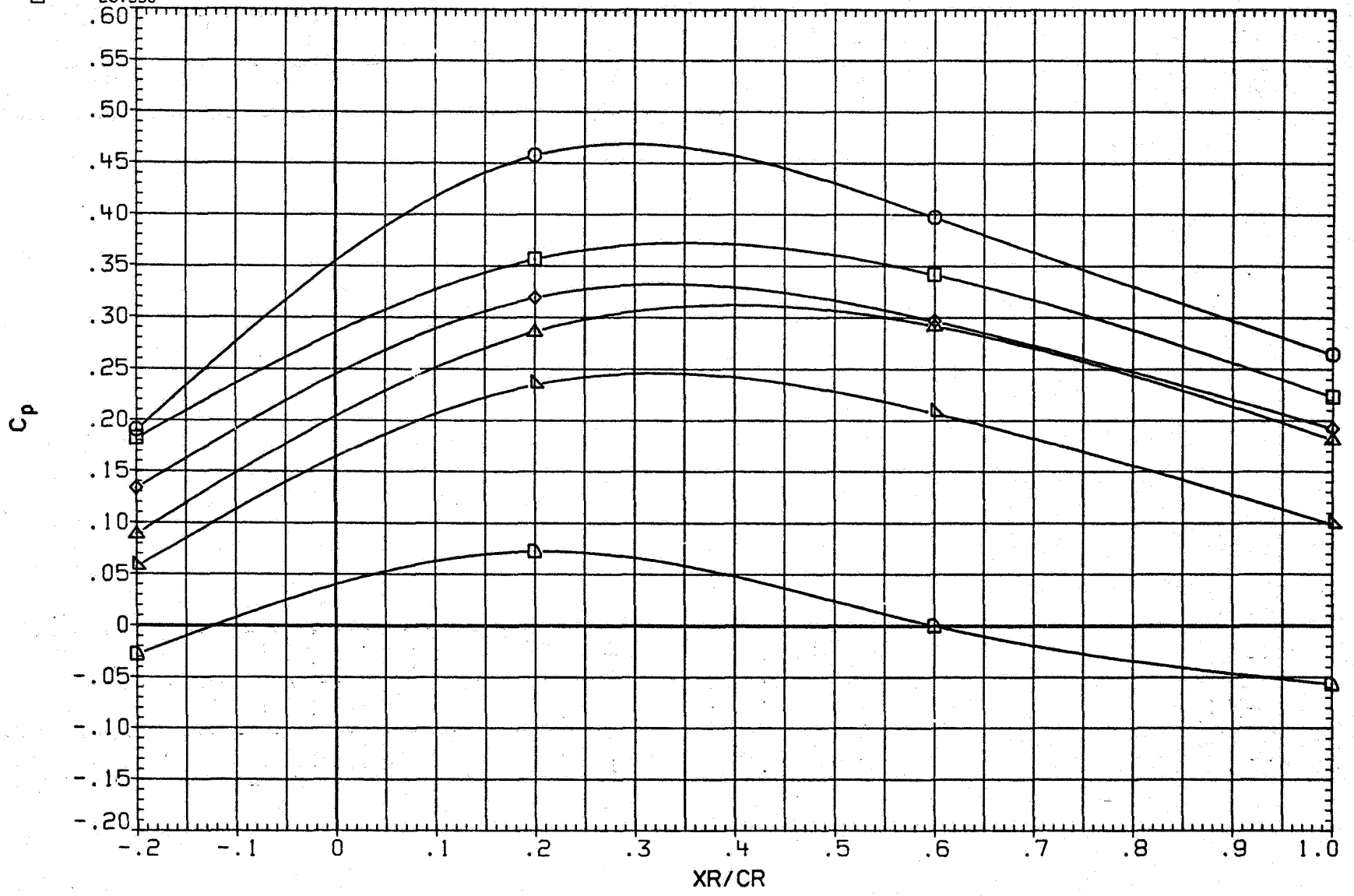


FIG 139 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW02) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.600	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

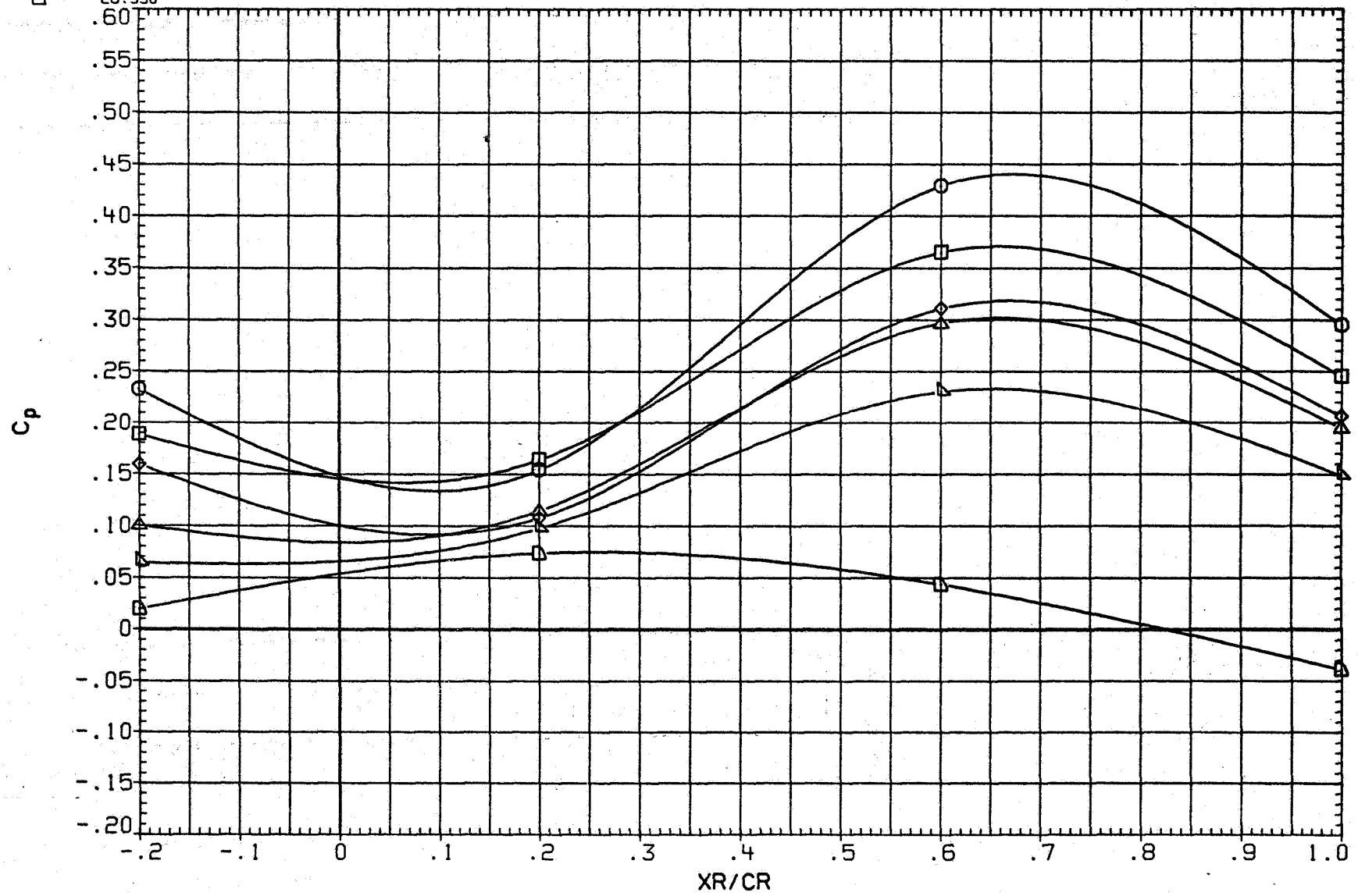


FIG 139 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW02) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.700	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
D	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

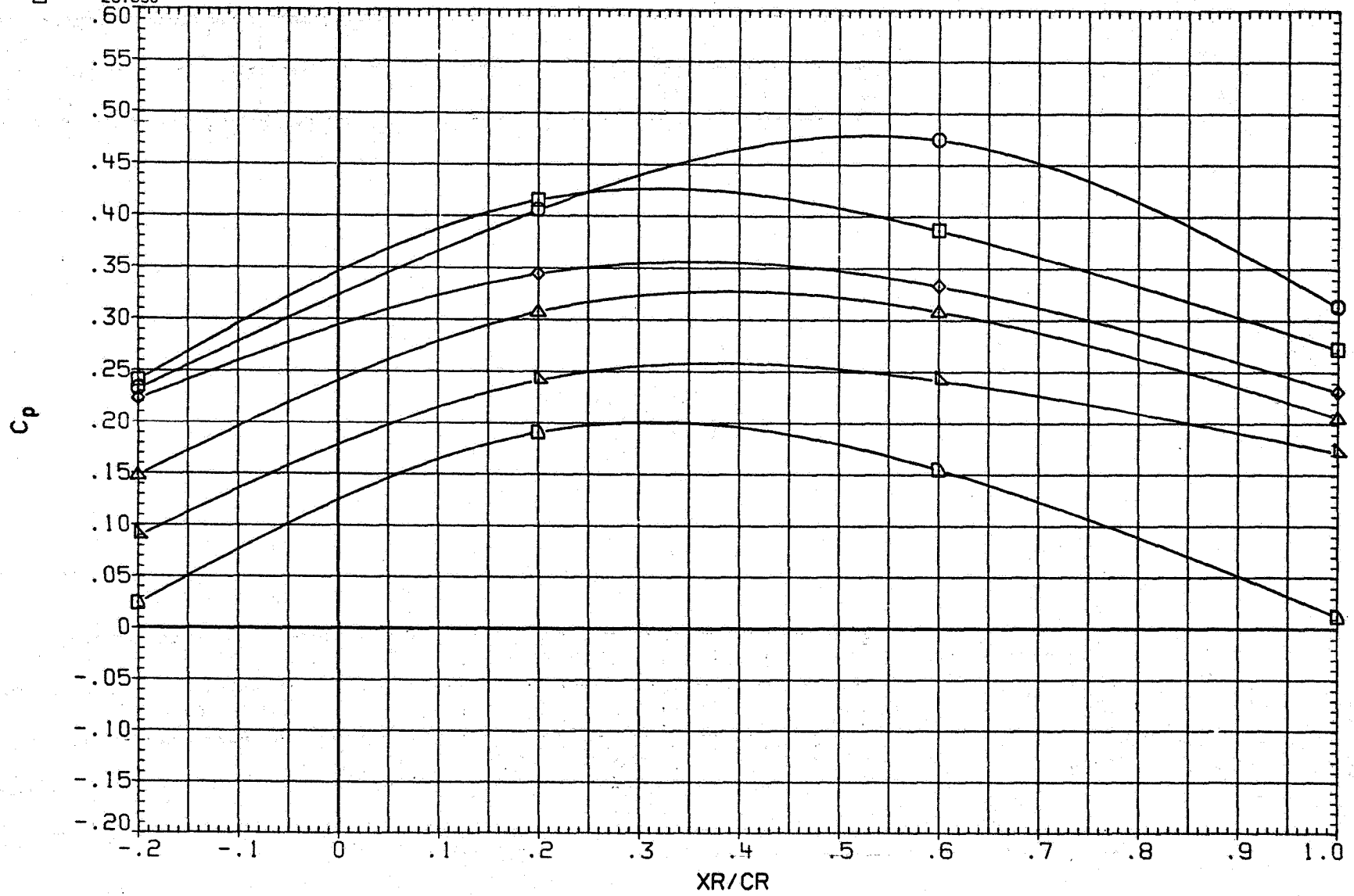


FIG 139 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW02) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.800	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

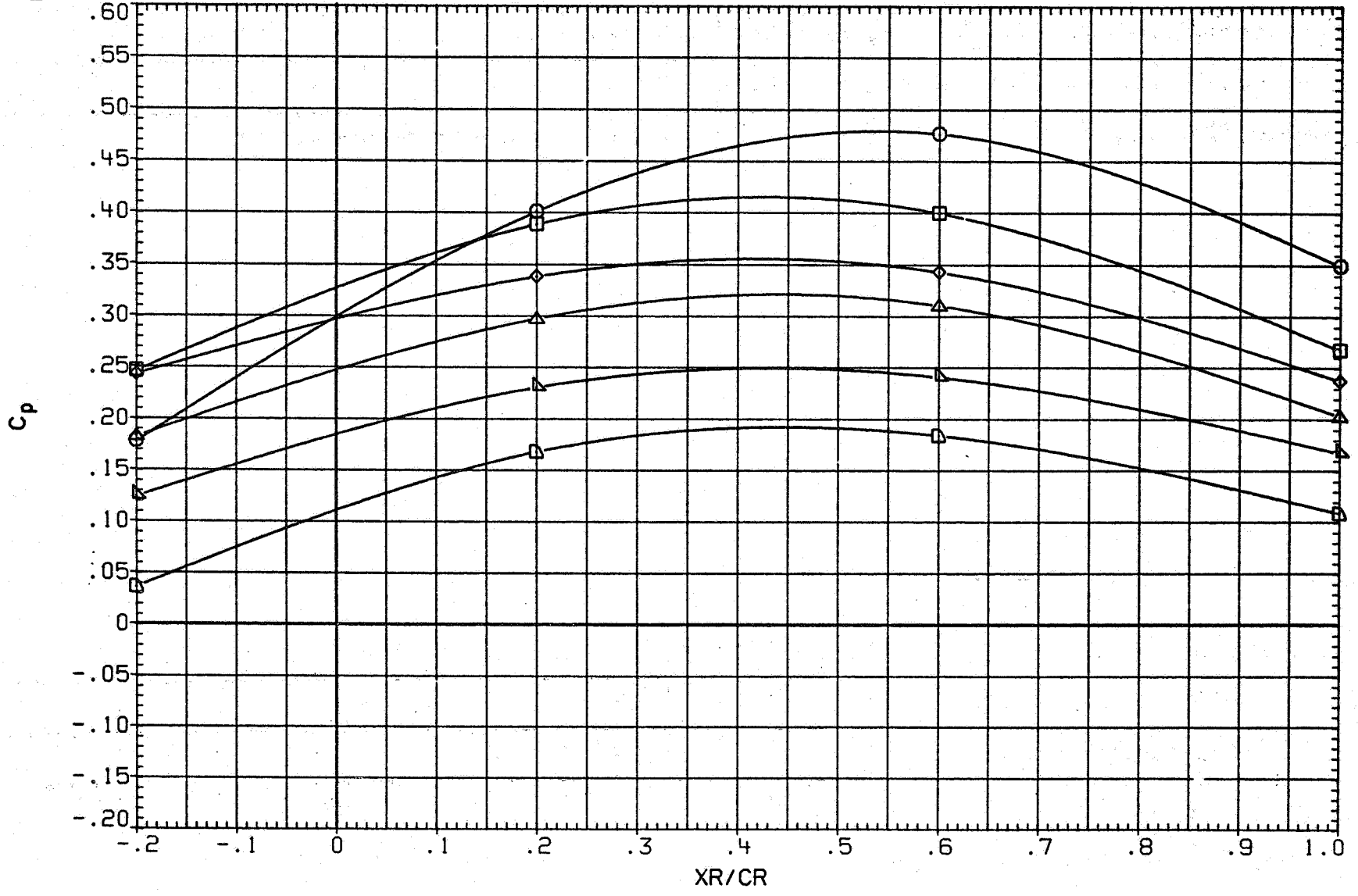


FIG 139 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW02) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.182	.900	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
▱	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

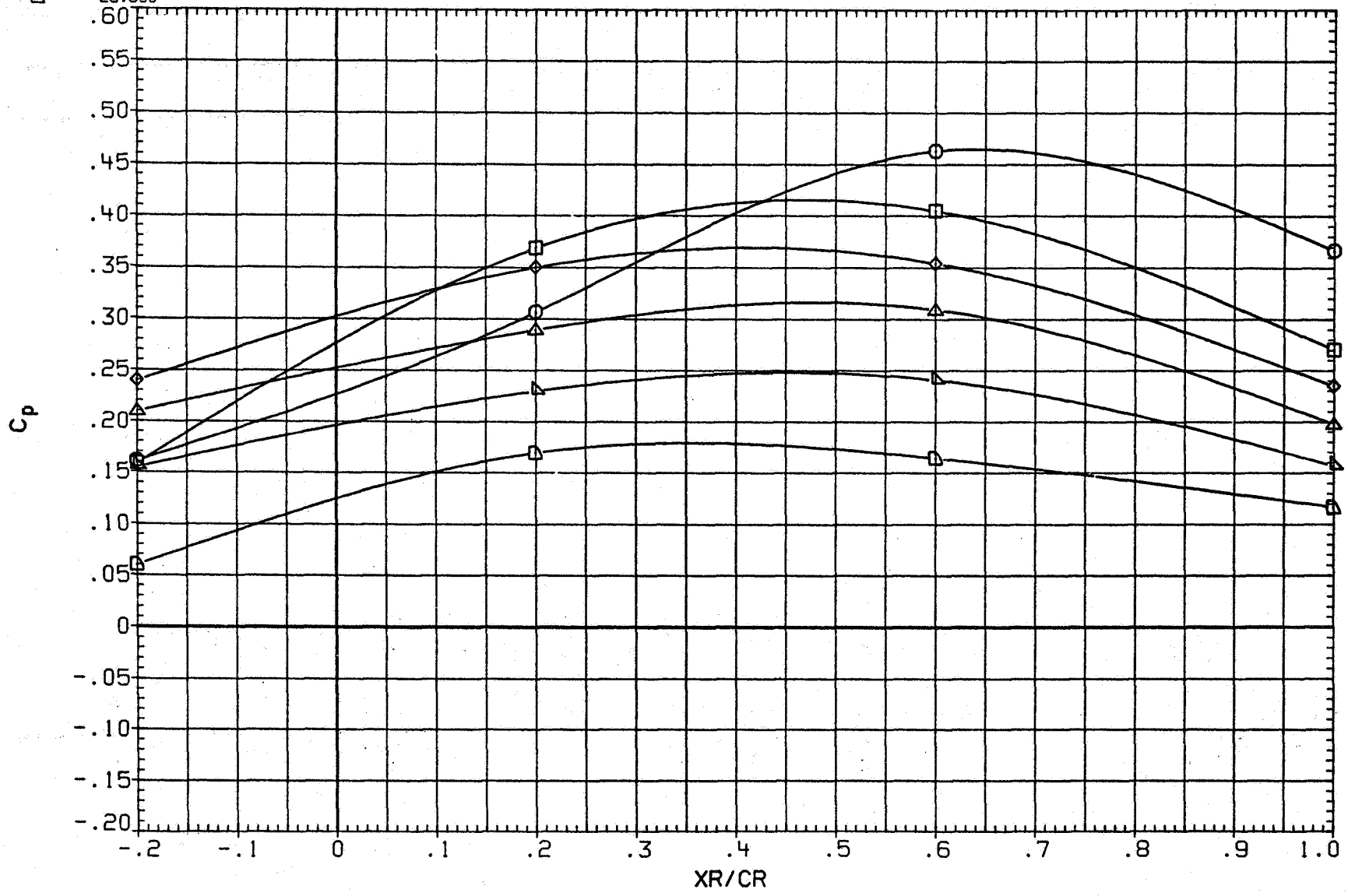


FIG 139 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW64) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.100	3.000
□	4.984		
◇	10.029		
△	15.190		
◁	20.237		
▷	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

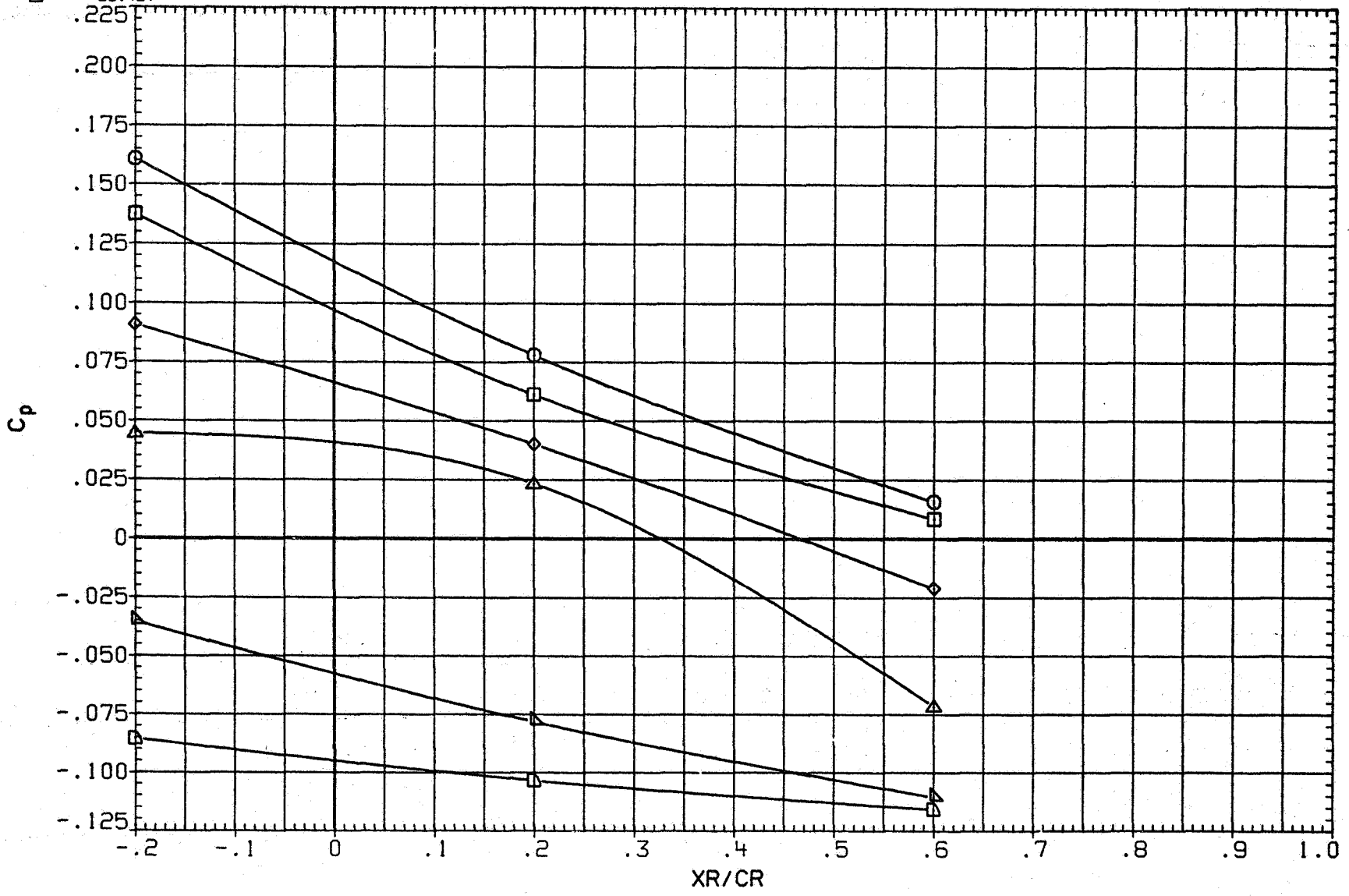


FIG 140 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW64) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.200	3.000
□	4.984		
◇	10.029		
△	15.190		
◁	20.237		
▷	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

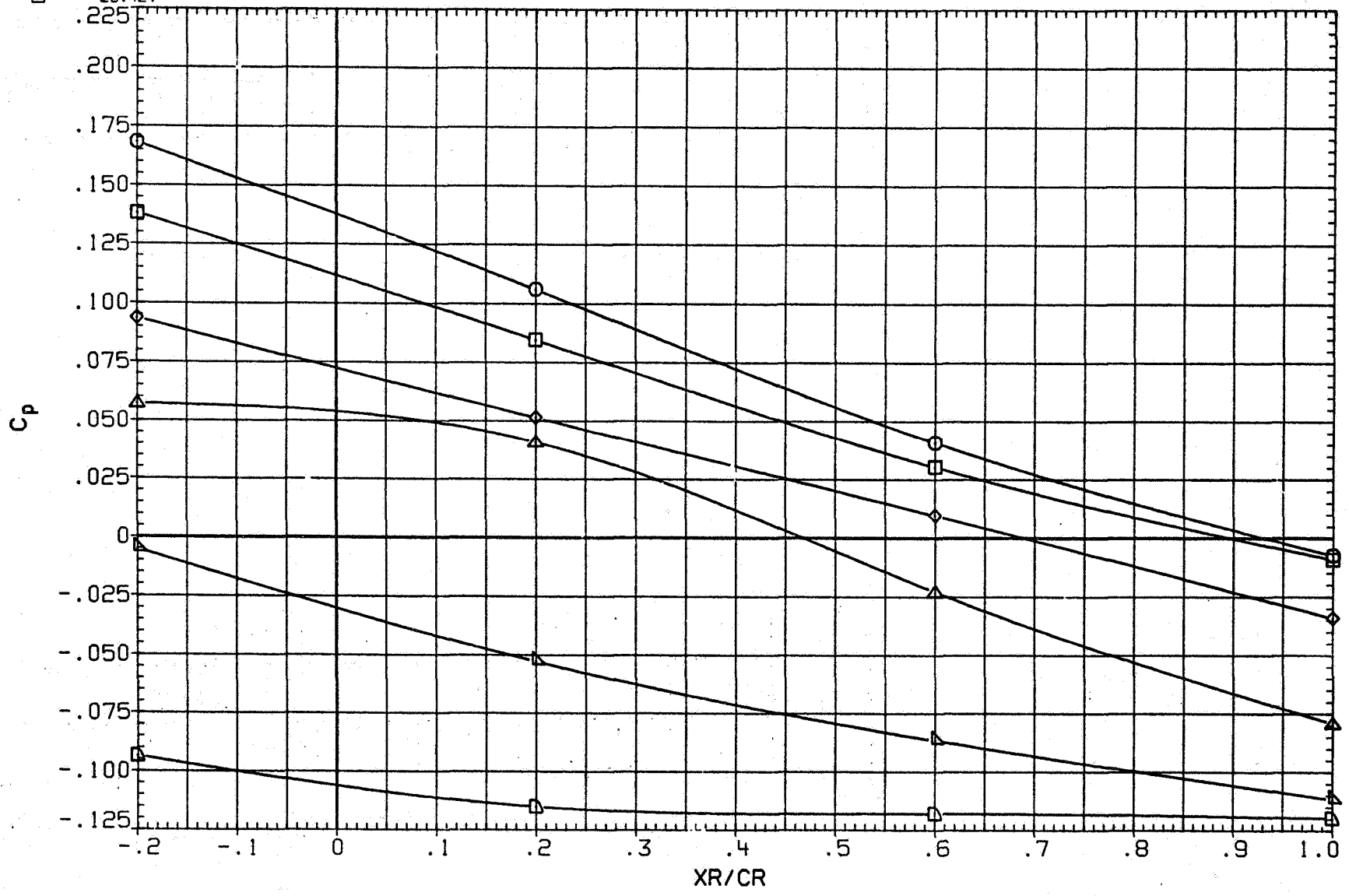


FIG 140 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW64) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.300	3.000
□	4.984		
◇	10.029		
△	15.190		
◁	20.237		
▷	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

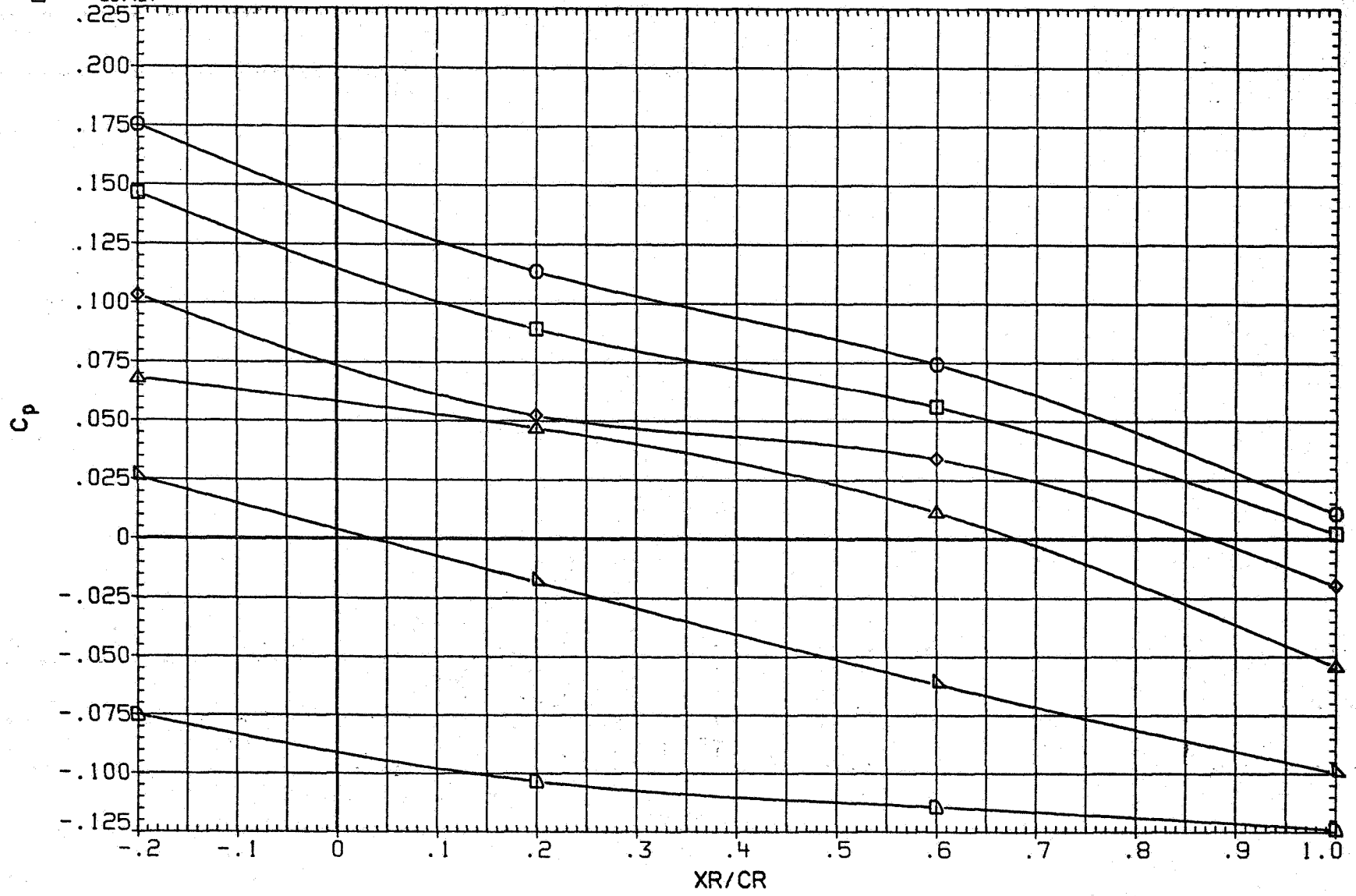


FIG 140 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW64) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.400	3.000
□	4.984		
◇	10.029		
△	15.190		
◁	20.237		
D	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

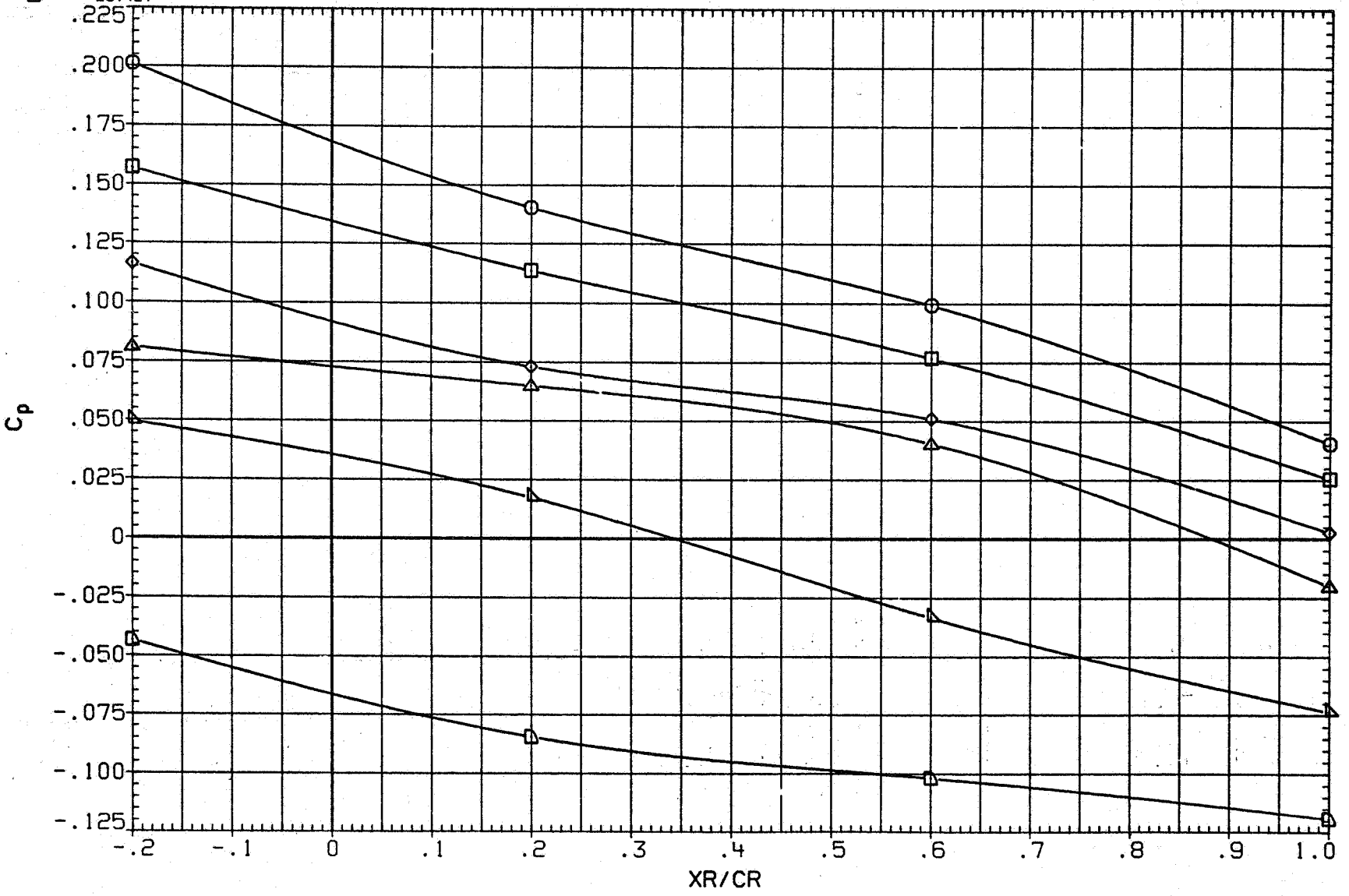


FIG 140 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW64) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.500	3.000
□	4.984		
◇	10.029		
△	15.190		
◁	20.237		
▷	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

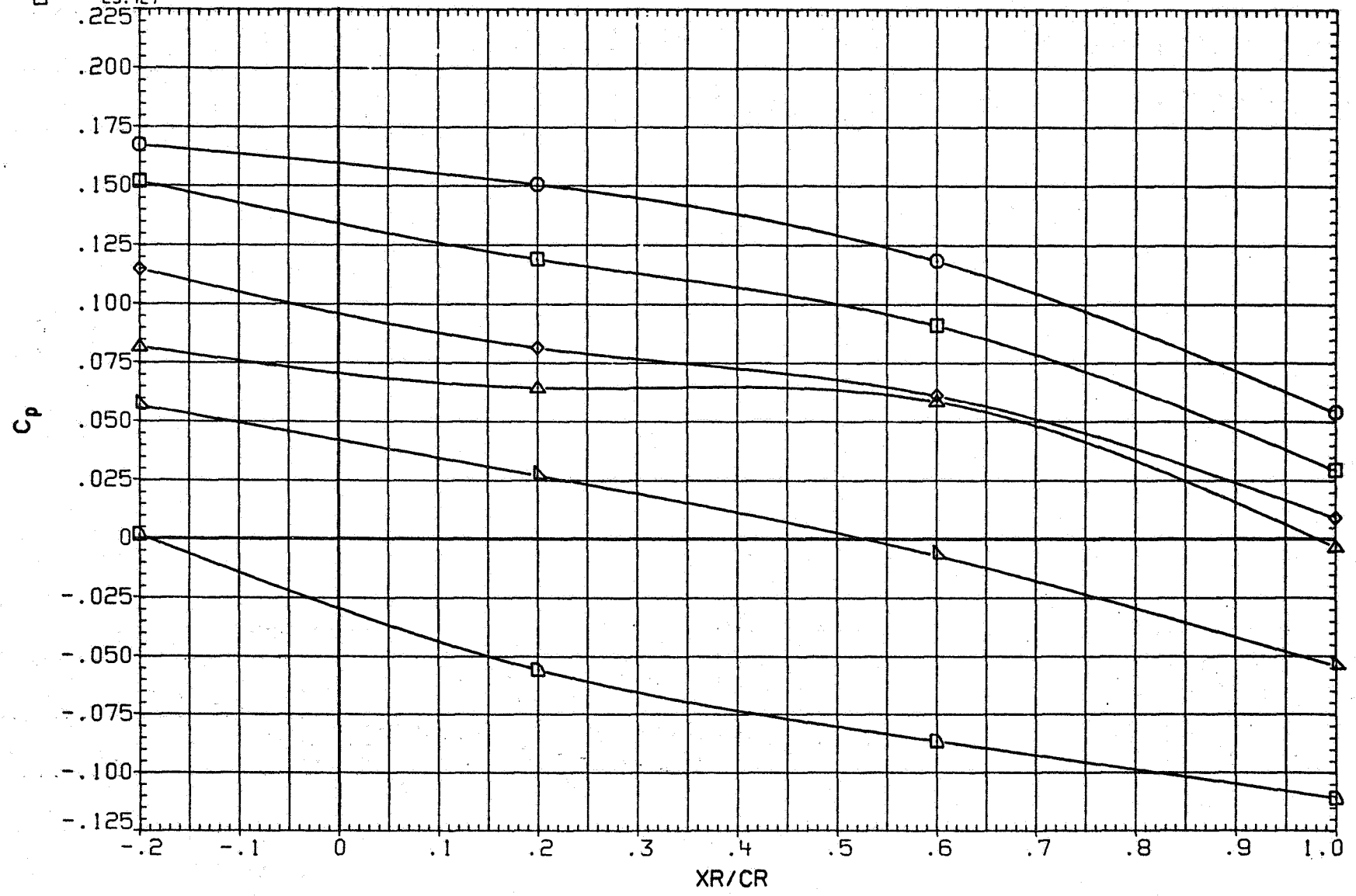


FIG 140 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW64) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.600	3.000
□	4.984		
◇	10.029		
△	15.190		
◁	20.237		
D	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

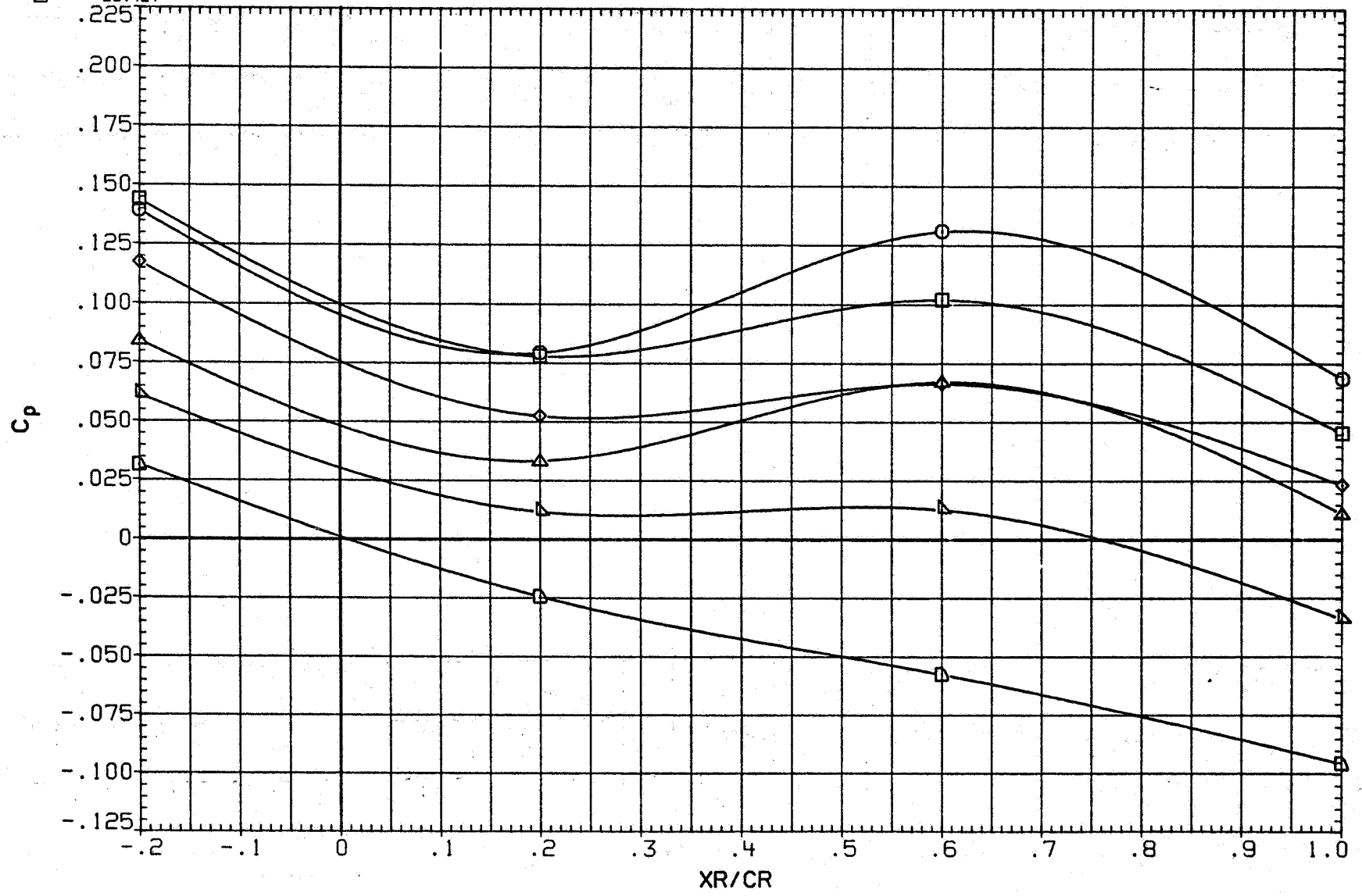


FIG 140 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW64) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.700	3.000
□	4.984		
◇	10.029		
△	15.190		
◁	20.237		
▷	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

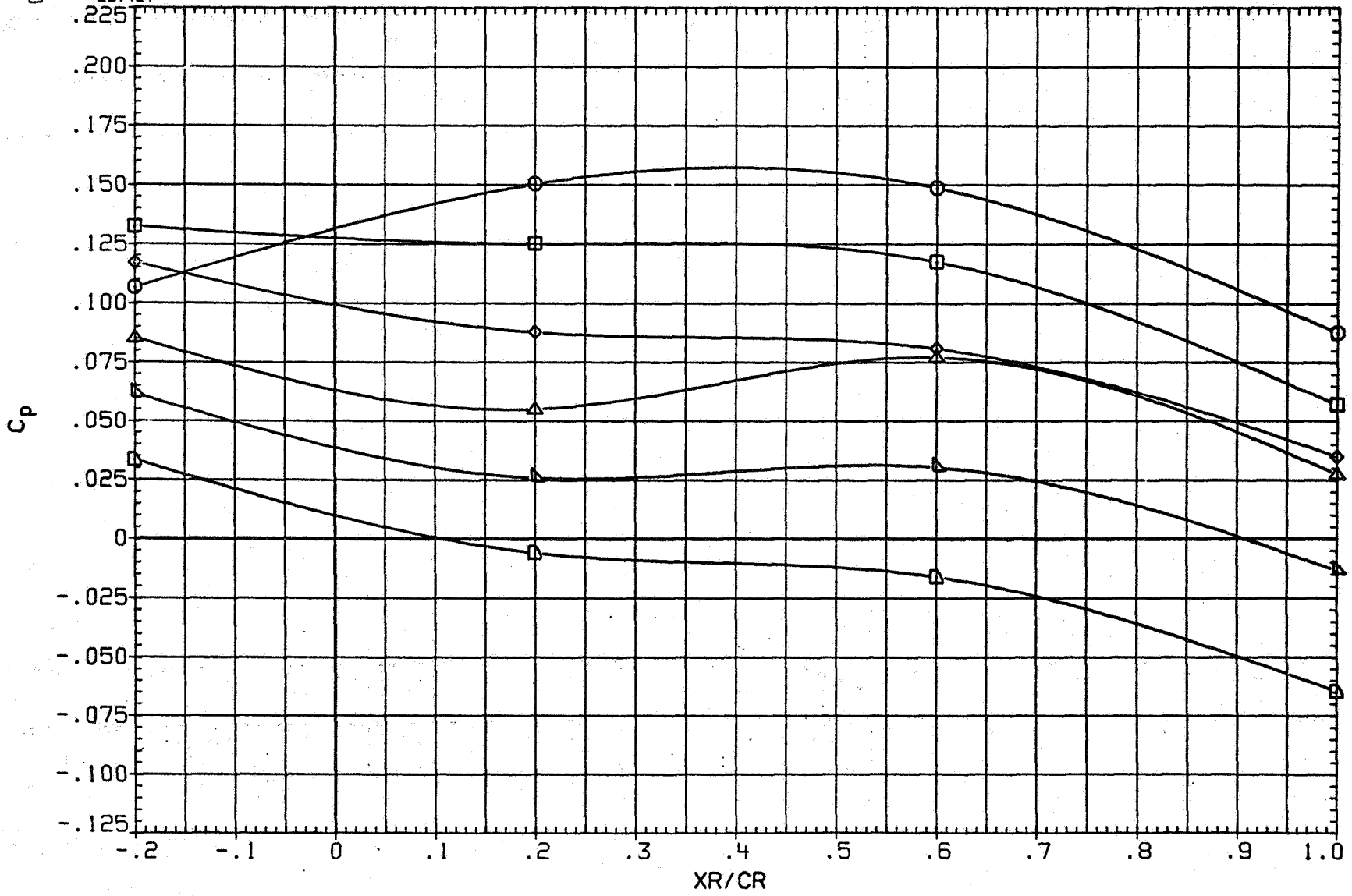


FIG 140 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW64) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.800	3.000
□	4.984		
◇	10.029		
△	15.190		
◁	20.237		
▷	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

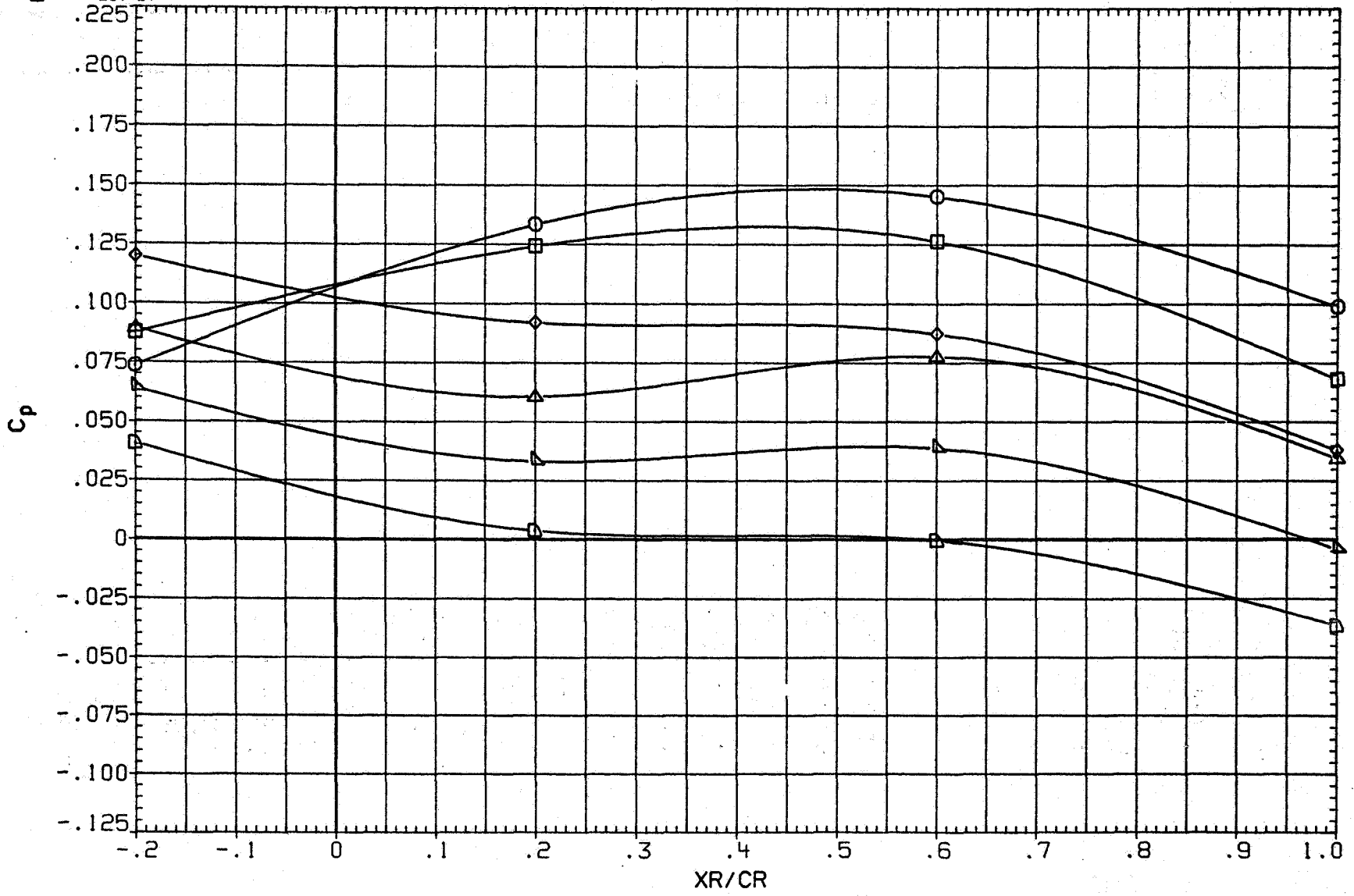


FIG 140 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW64) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.186	.900	3.000
□	4.984		
◇	10.029		
△	15.190		
⊿	20.237		
D	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

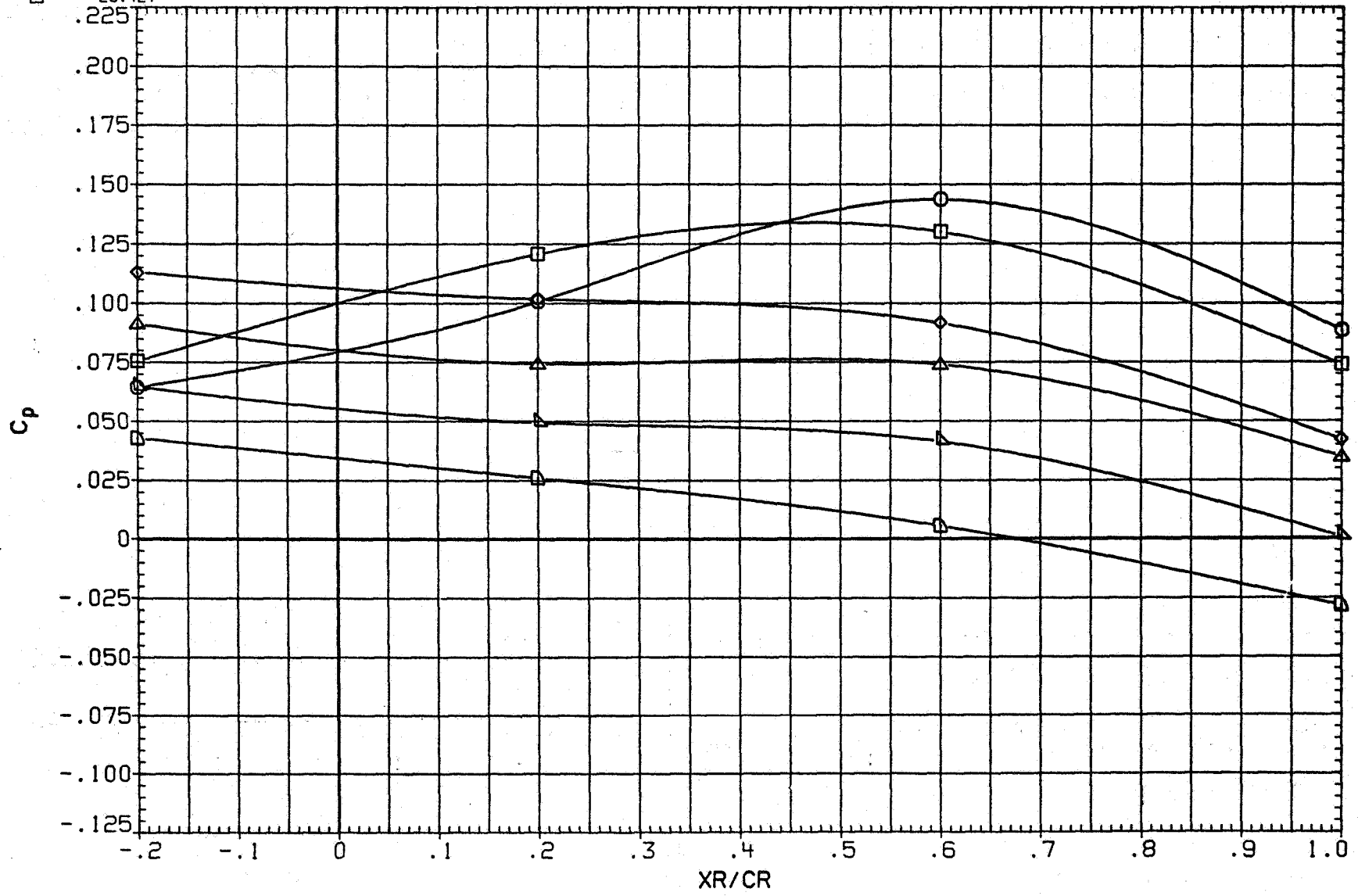


FIG 140 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.305	.100	3.000
□	5.011		
◇	10.077		
△	15.180		
◁	20.245		
D	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

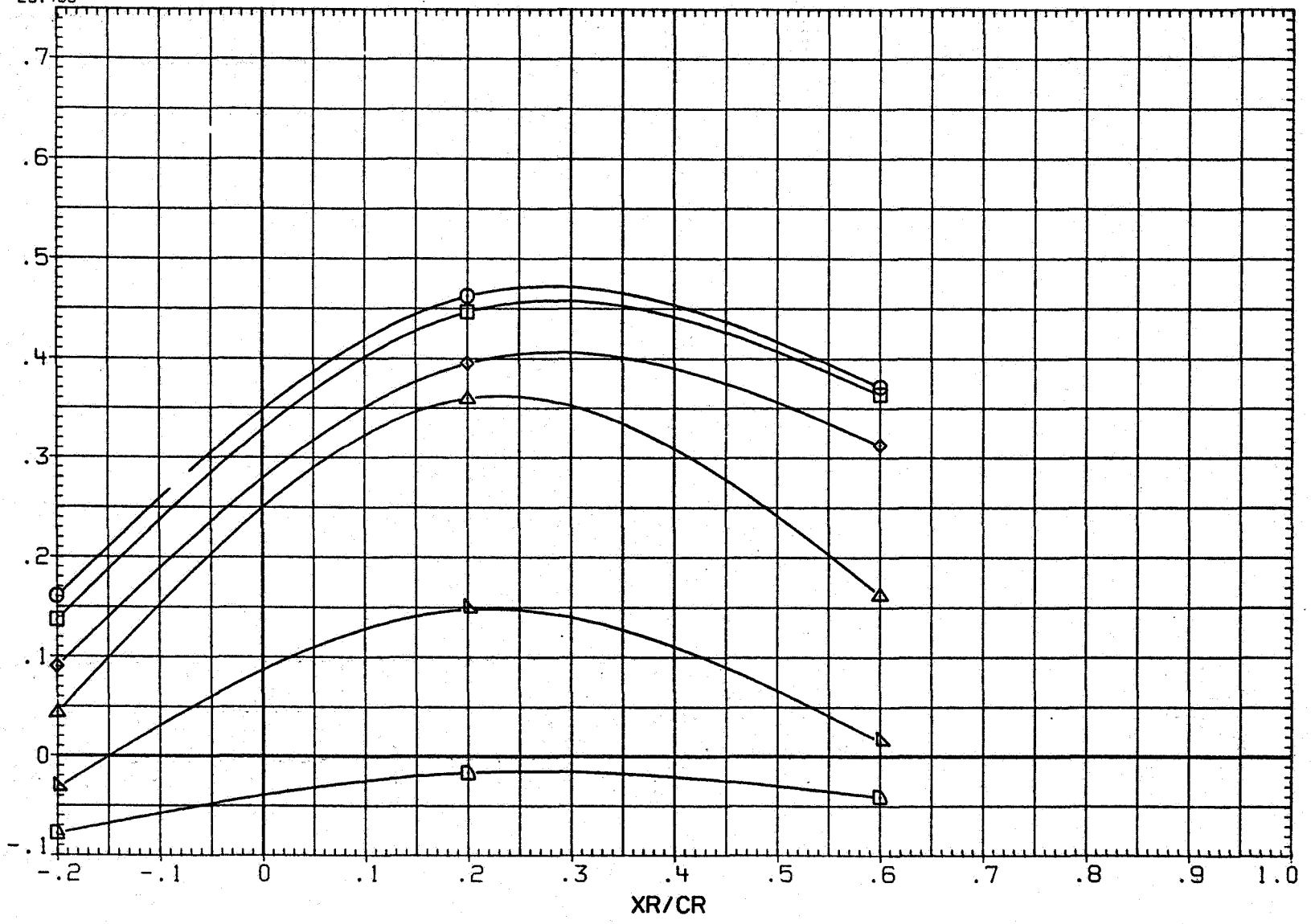


FIG 141 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.305	.200	3.000
□	5.011		
◇	10.077		
△	15.180		
◁	20.245		
▷	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

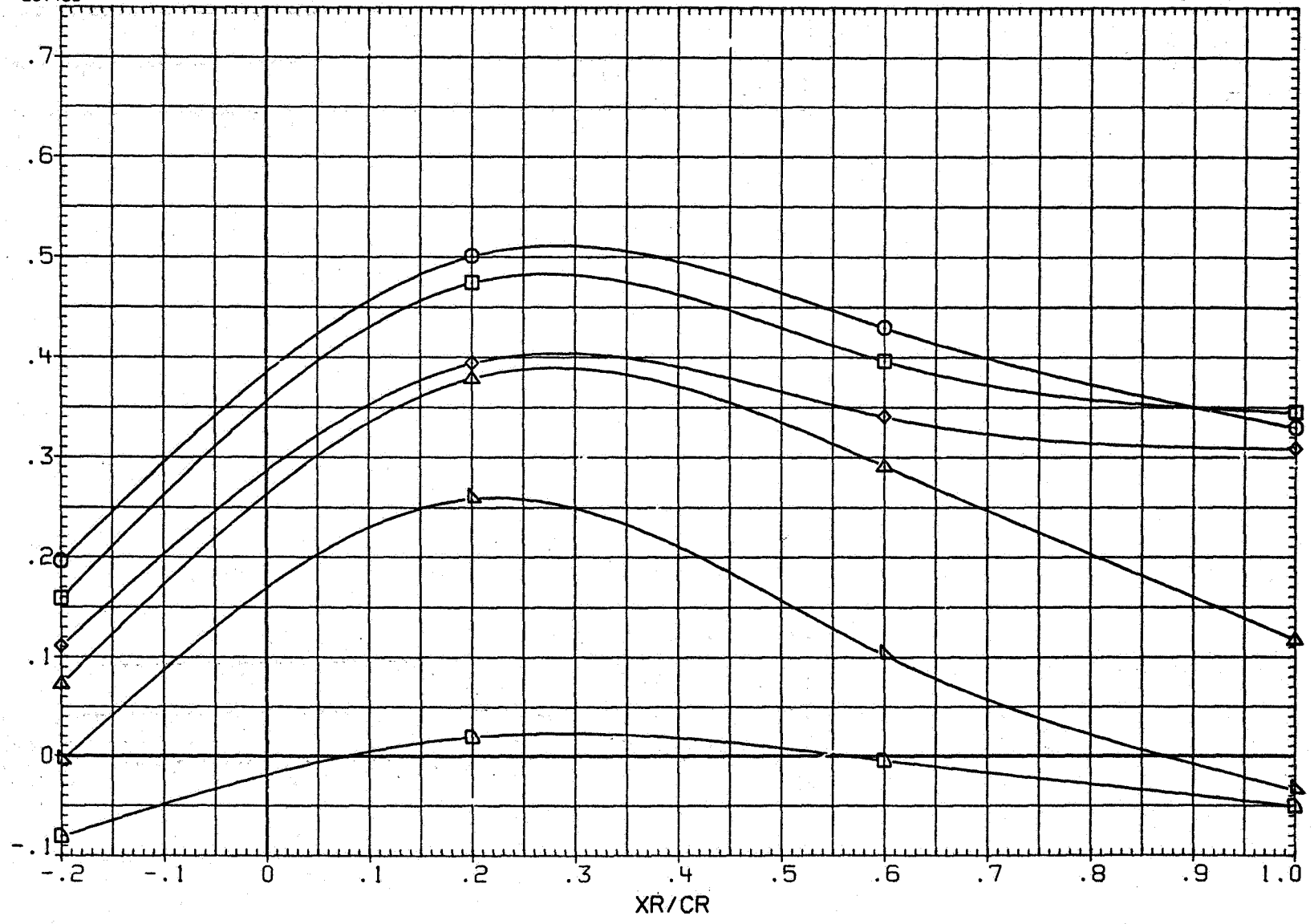


FIG 141 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.305	.300	3.000
□	5.011		
◇	10.077		
△	15.180		
◁	20.245		
D	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

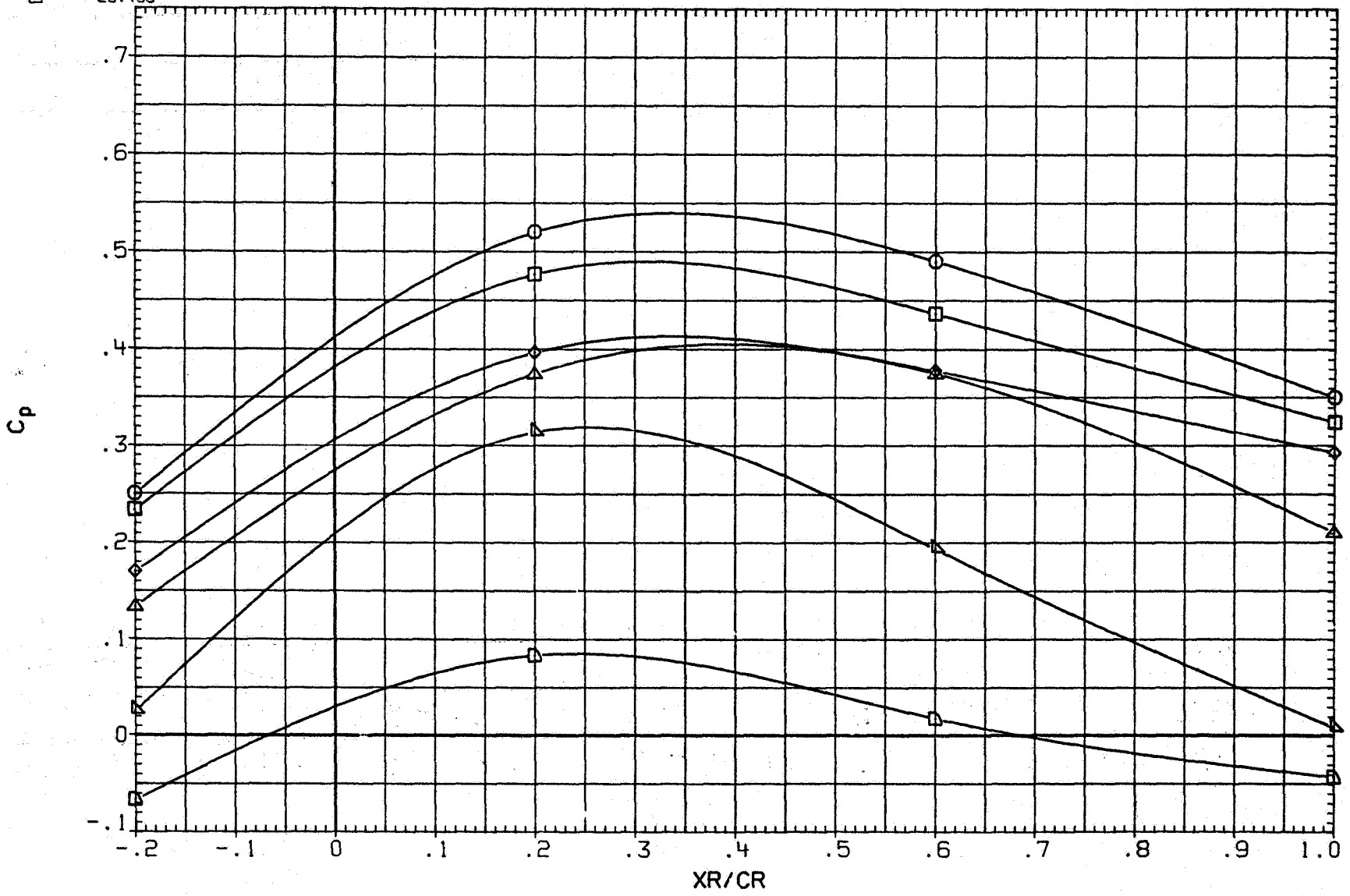


FIG 141 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.305	.400	3.000
□	5.011		
◇	10.077		
△	15.180		
◁	20.245		
▷	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

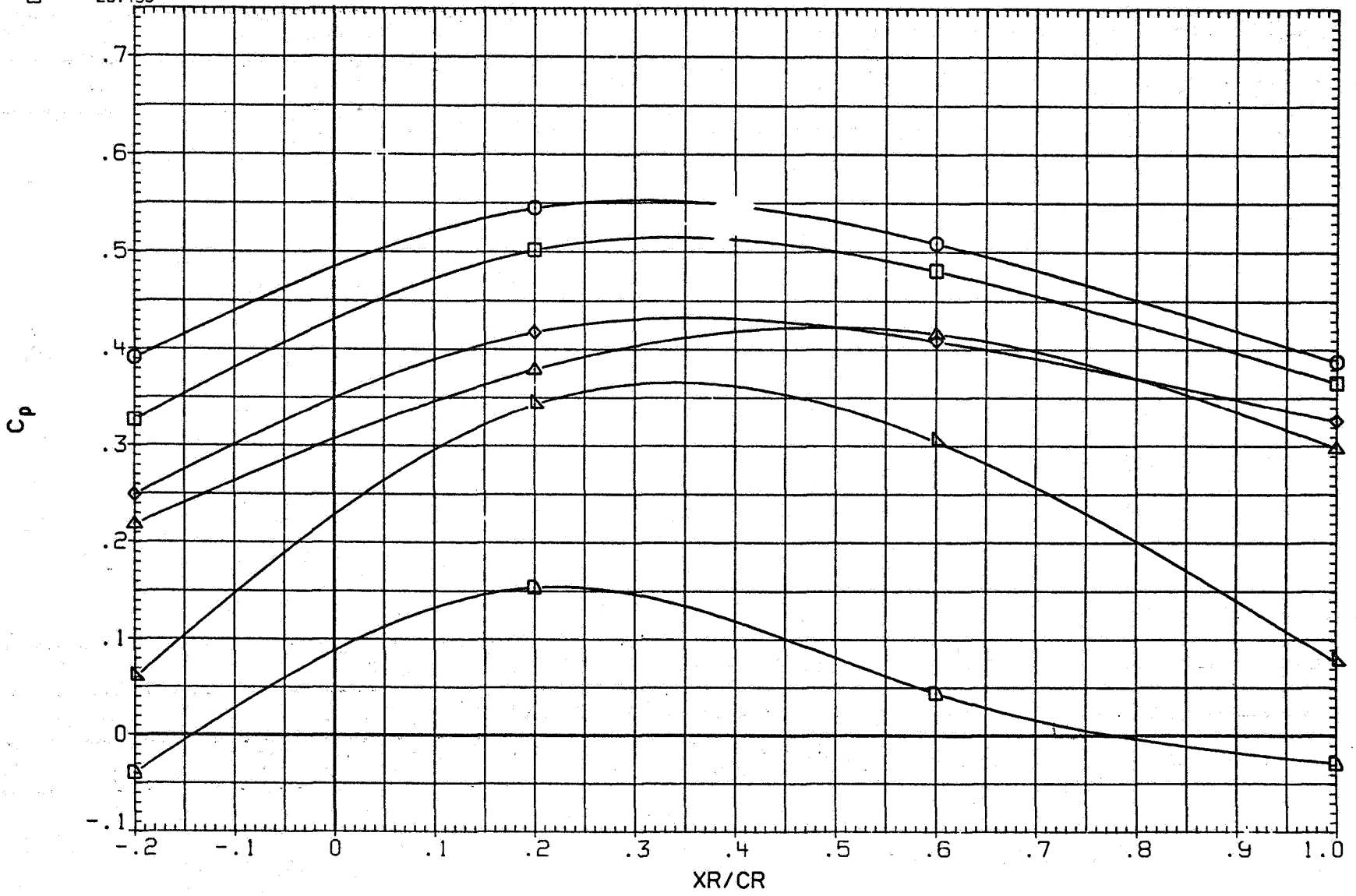


FIG 141 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.305	.500	3.000
□	5.011		
◇	10.077		
△	15.180		
◁	20.245		
D	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

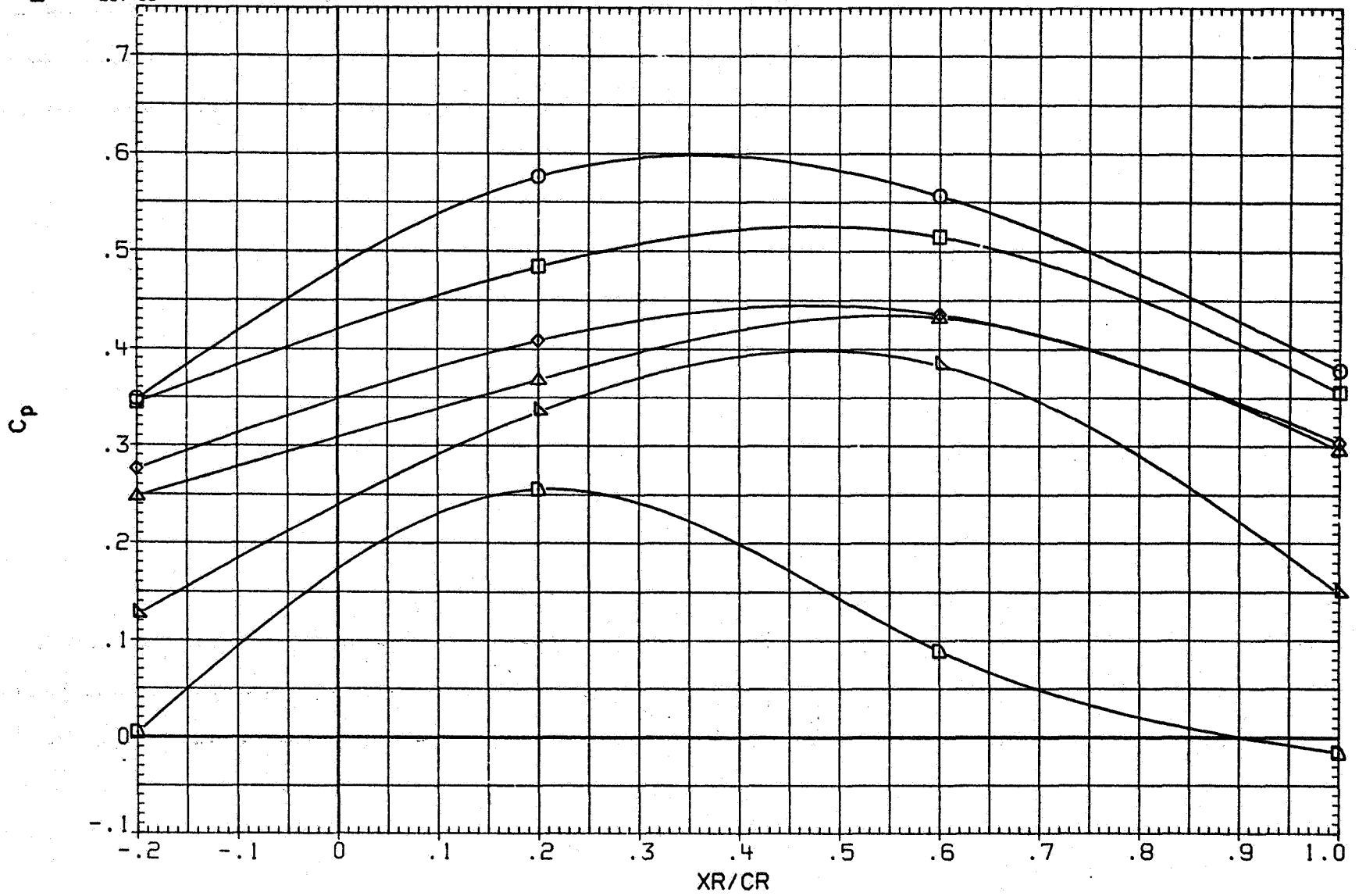


FIG 141 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.305	.600	3.000
□	5.011		
◇	10.077		
△	15.180		
◁	20.245		
D	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

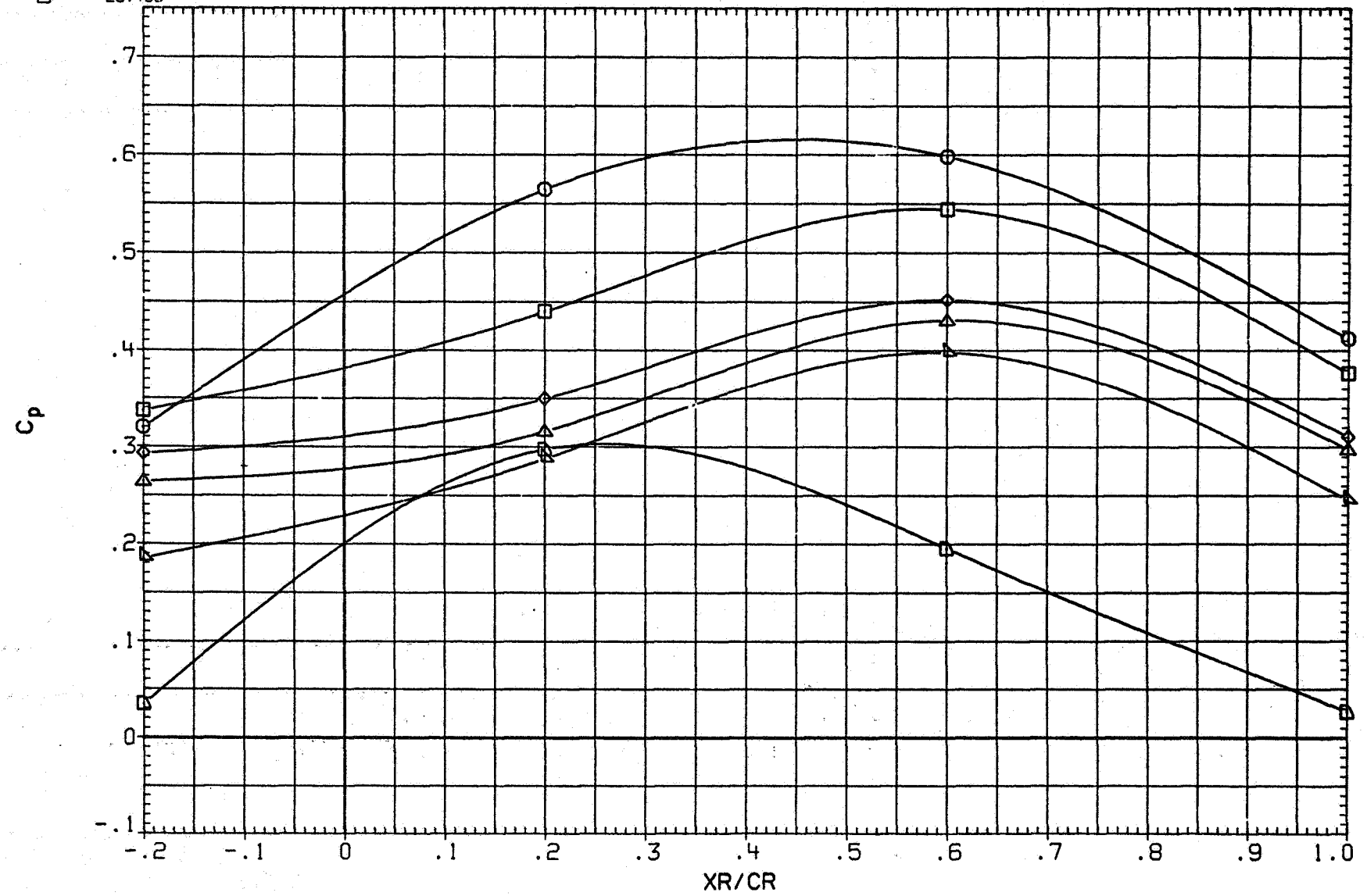


FIG 141 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.305	.700	3.000
□	5.011		
◇	10.077		
△	15.180		
◁	20.245		
▷	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

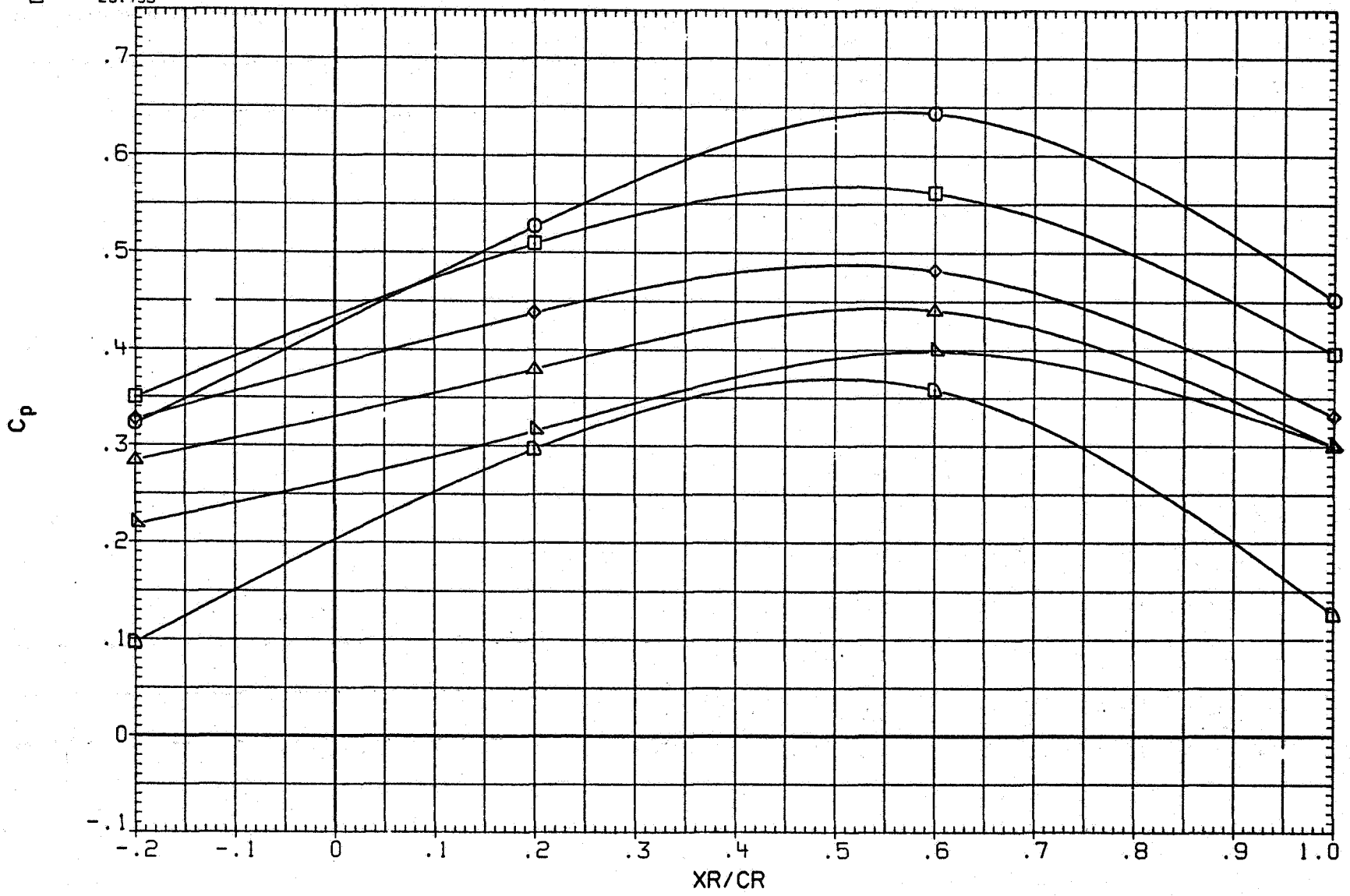


FIG 141 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.305	.800	3.000
□	5.011		
◇	10.077		
△	15.180		
◁	20.245		
▷	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

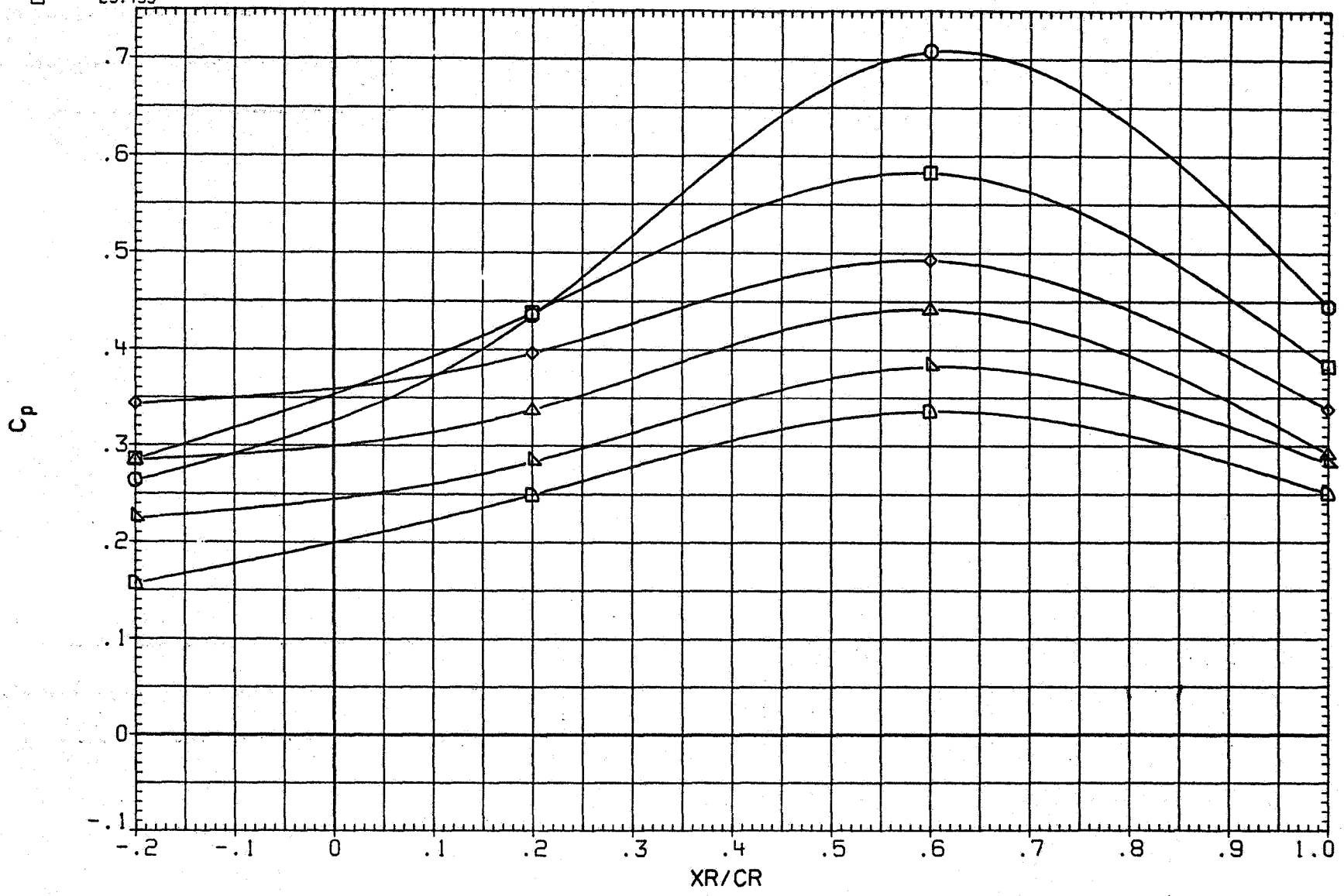


FIG 141 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
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□	5.011		
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△	15.180		
◪	20.245		
◺	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

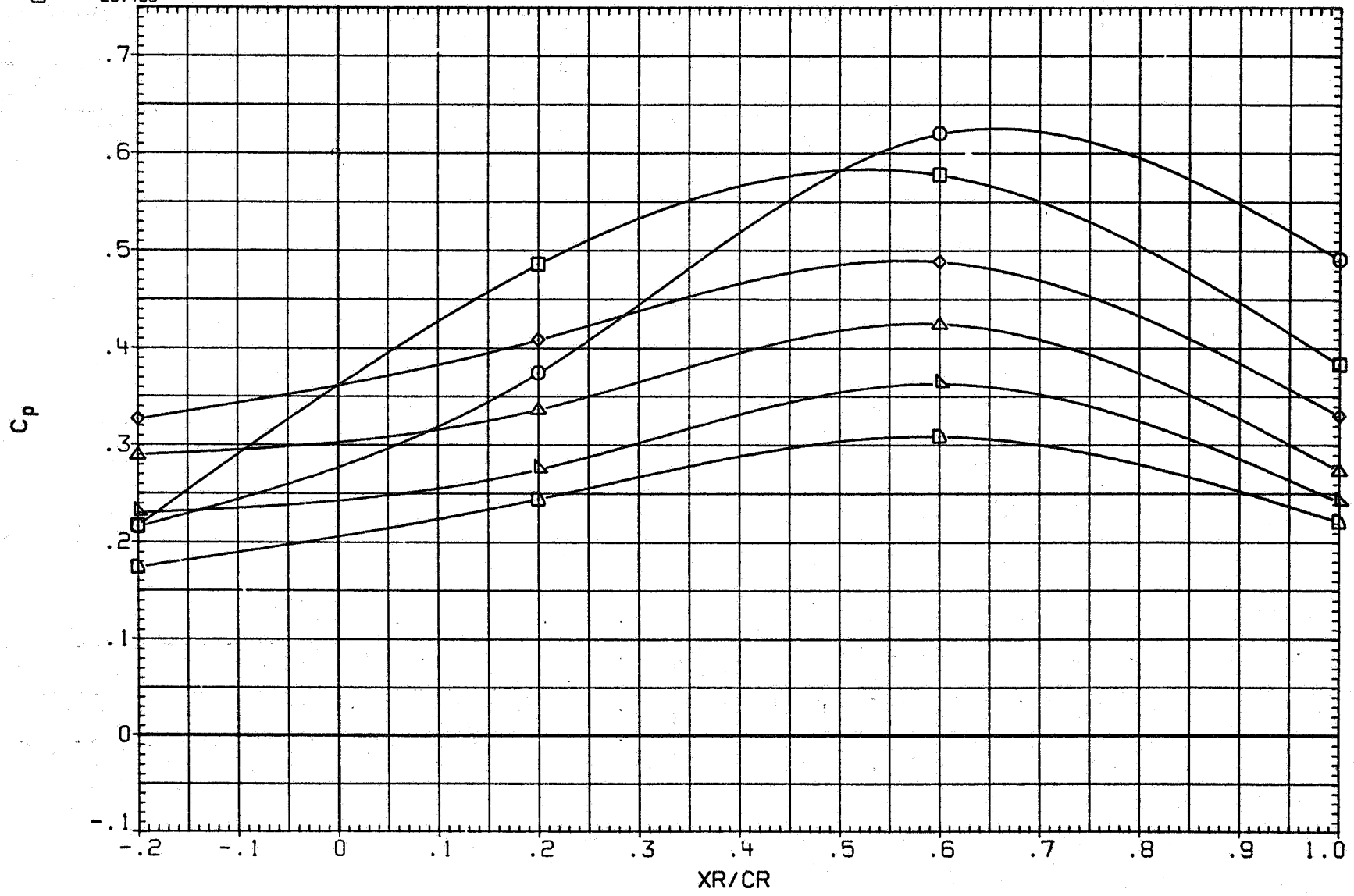

FIG 141 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW94) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.100	3.000
□	5.049		
◇	10.118		
△	15.169		
◺	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

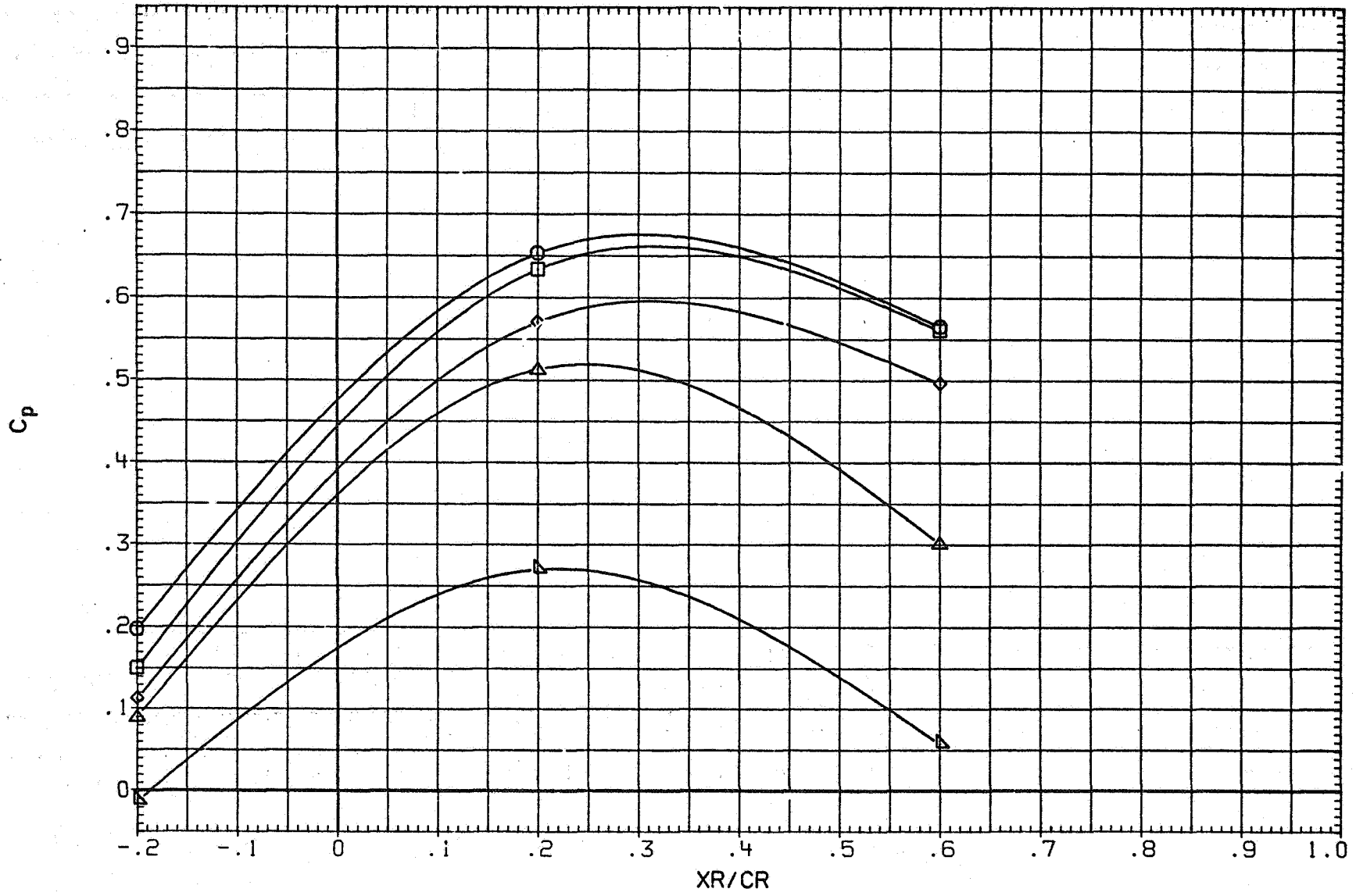

FIG 142 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.200	3.000
□	5.049		
◇	10.118		
△	15.169		
◁	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

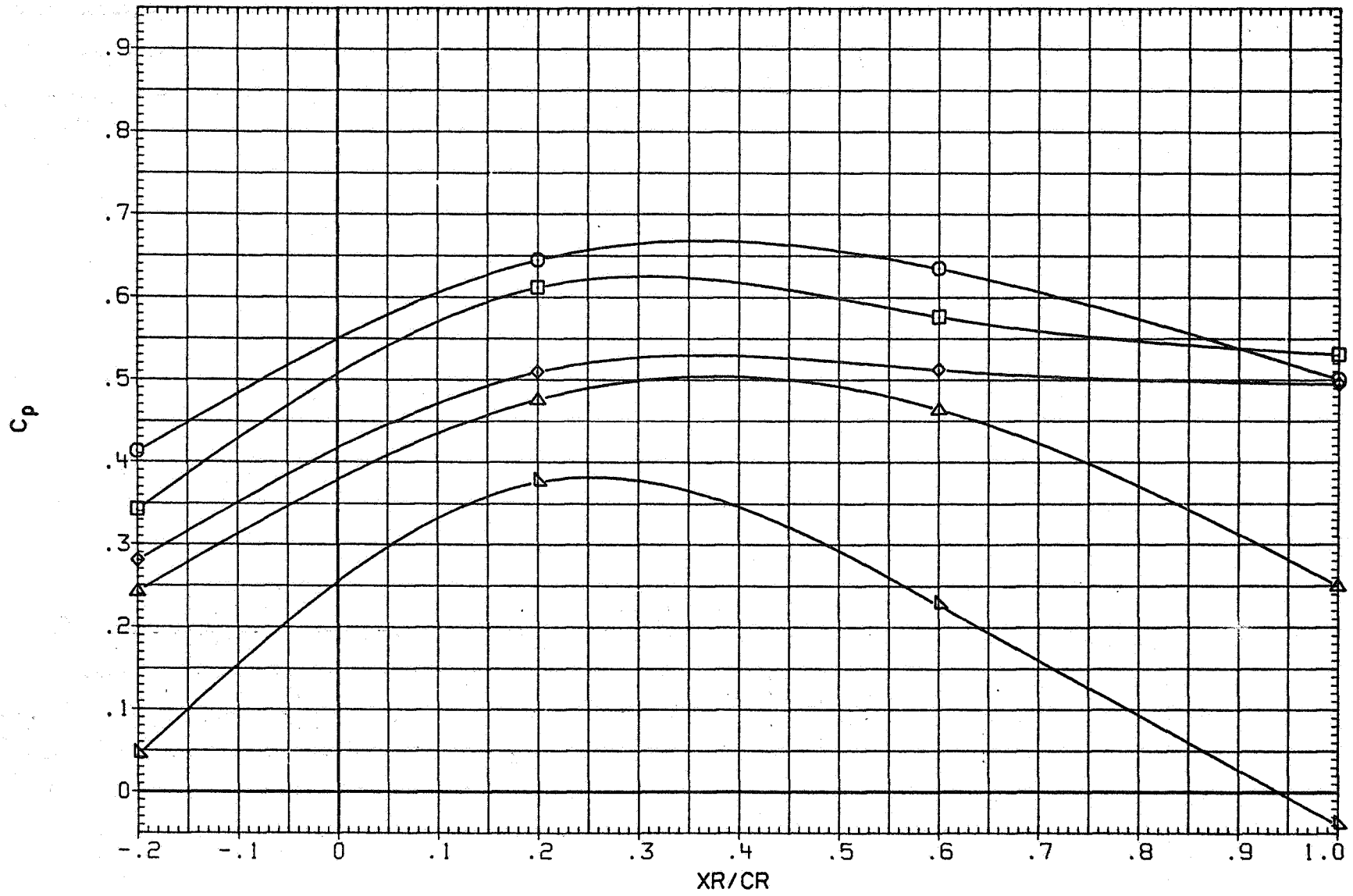

FIG 142 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.300	3.000
□	5.049		
◇	10.118		
△	15.169		
◺	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

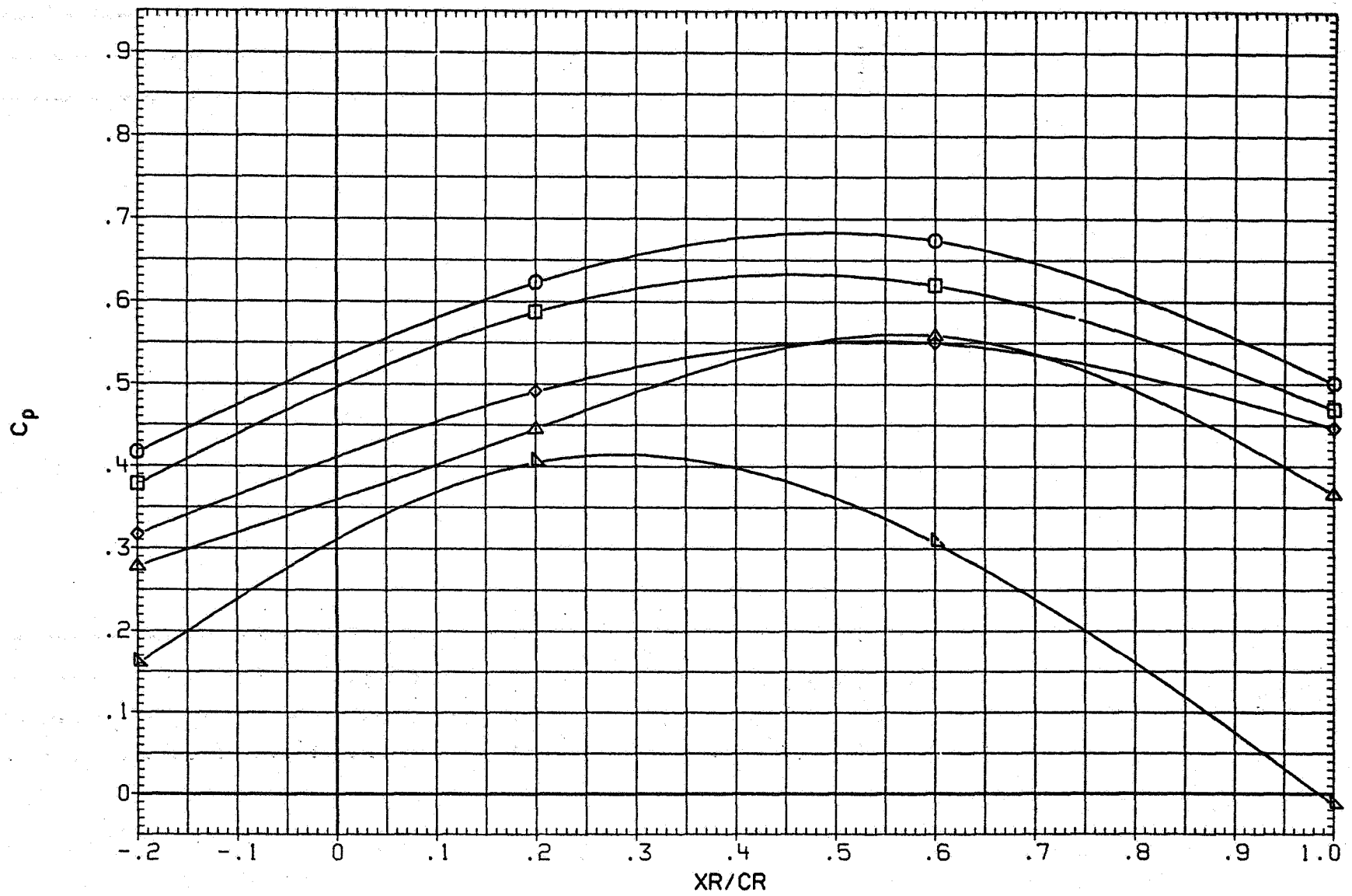

FIG 142 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.400	3.000
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◇	10.118		
△	15.169		
◁	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

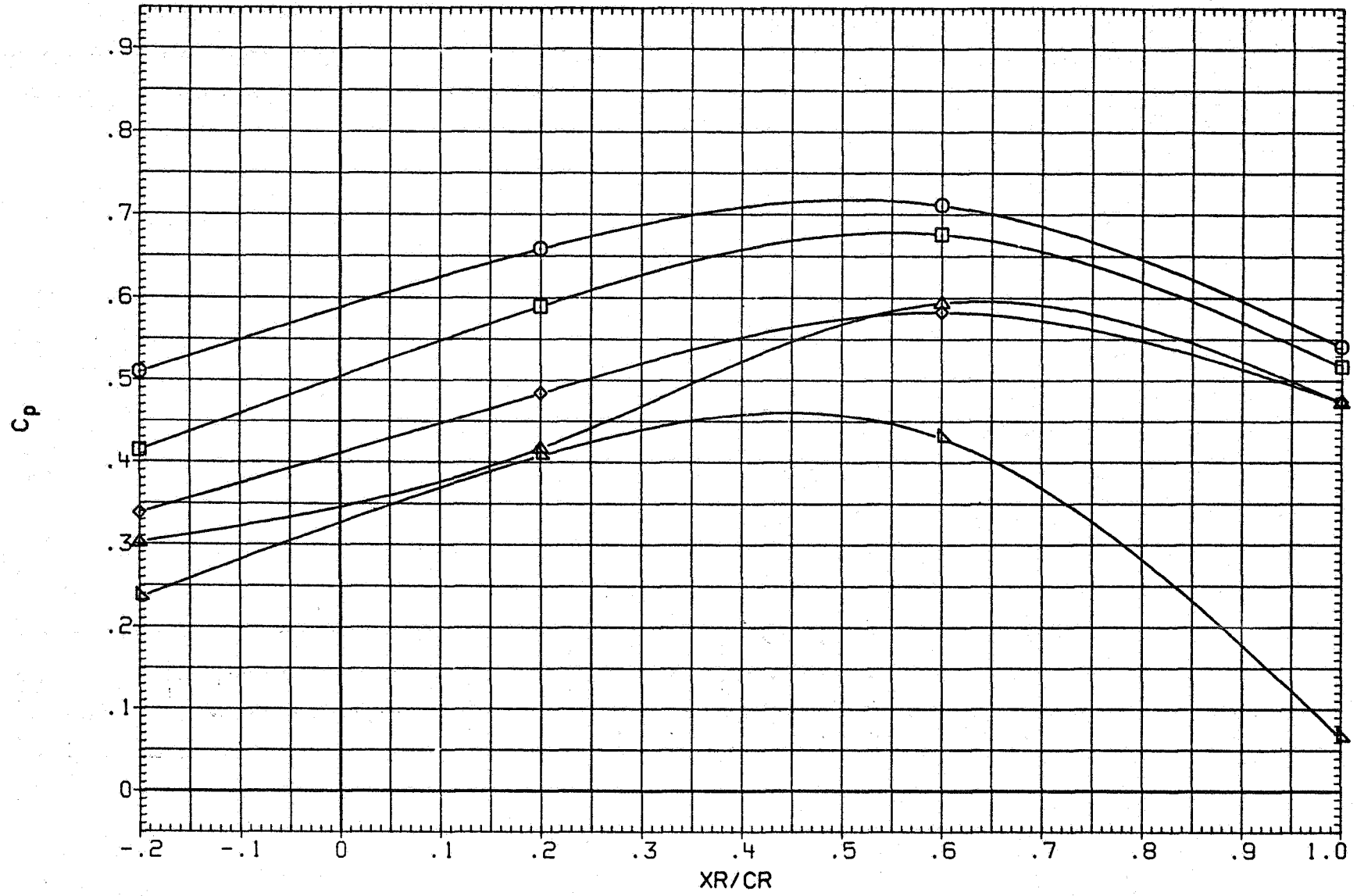

FIG 142 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.500	3.000
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◇	10.118		
△	15.169		
◁	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

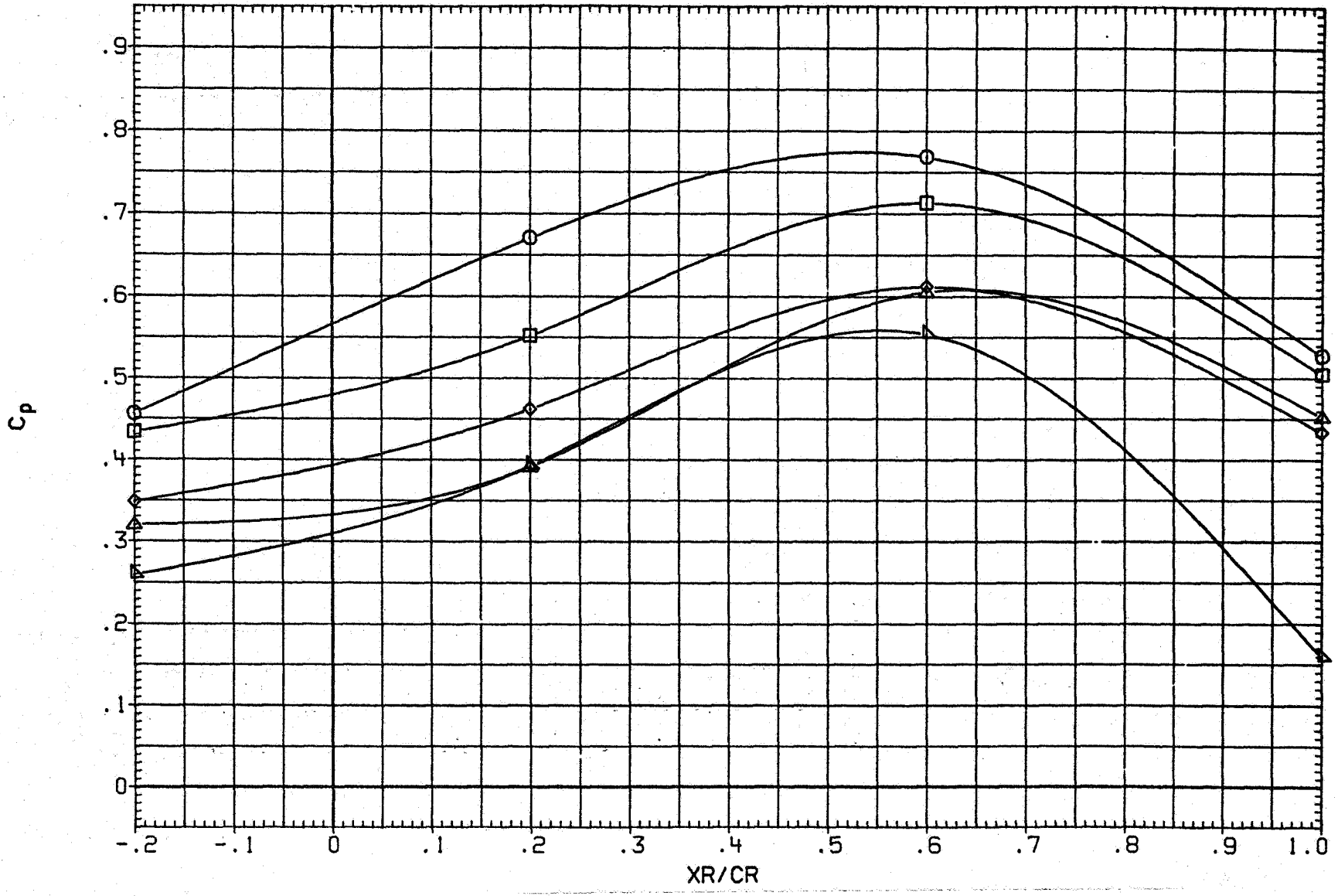

FIG 142 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.600	3.000
□	5.049		
◇	10.118		
△	15.169		
◺	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

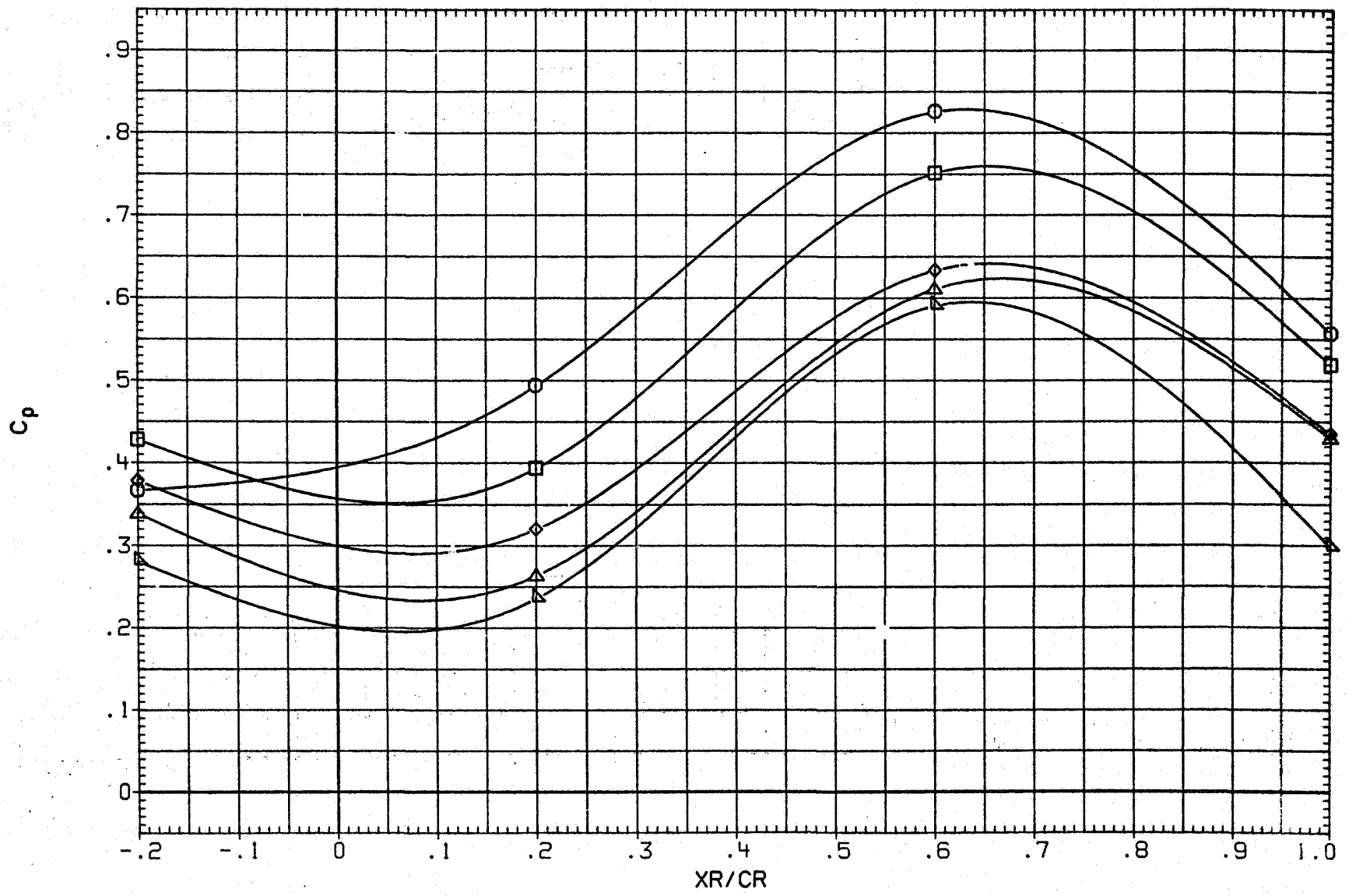

FIG 142 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.700	3.000
□	5.049		
◇	10.118		
△	15.169		
◺	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

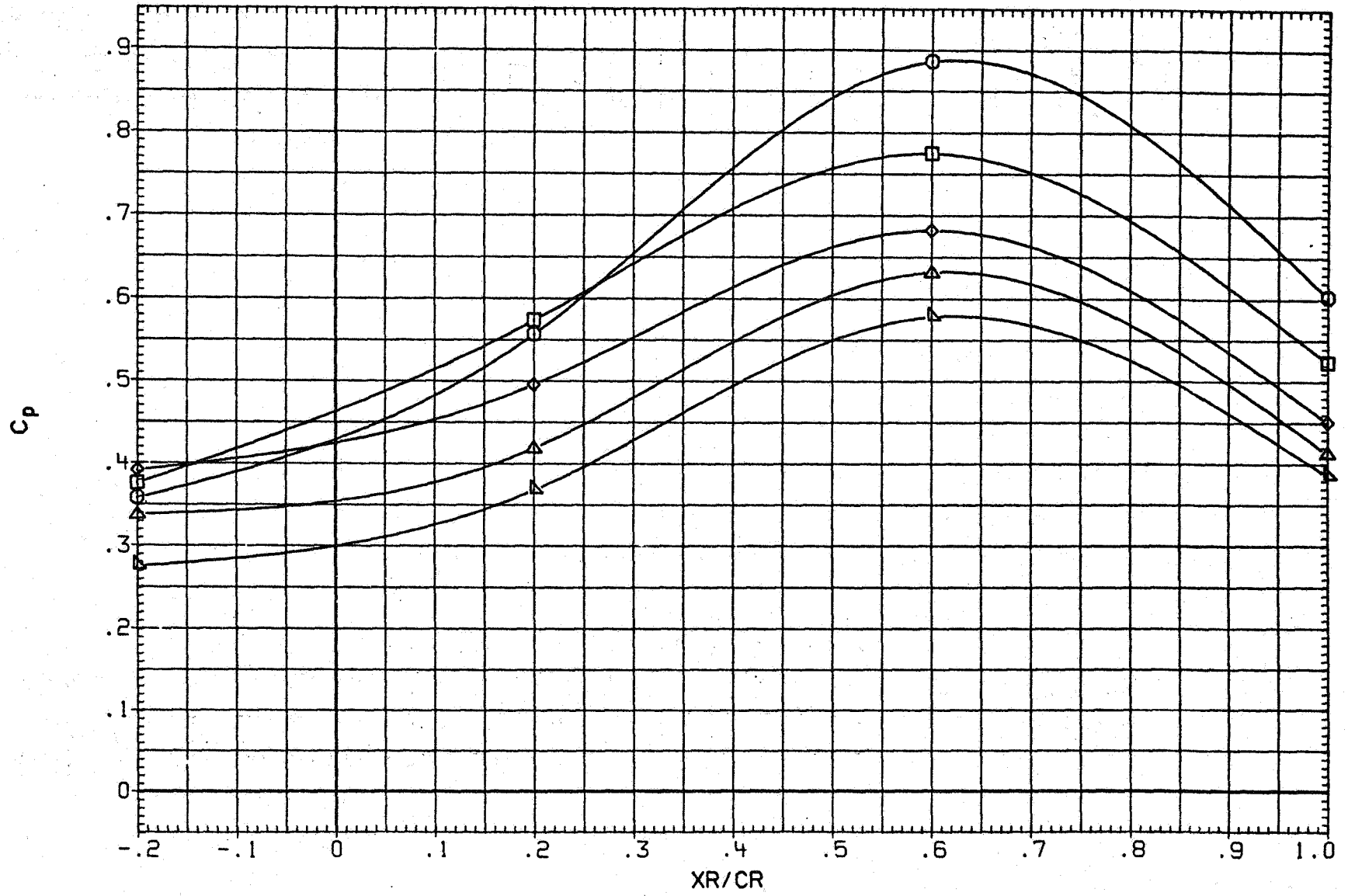

FIG 142 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.800	3.000
□	5.049		
◇	10.118		
△	15.169		
▽	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

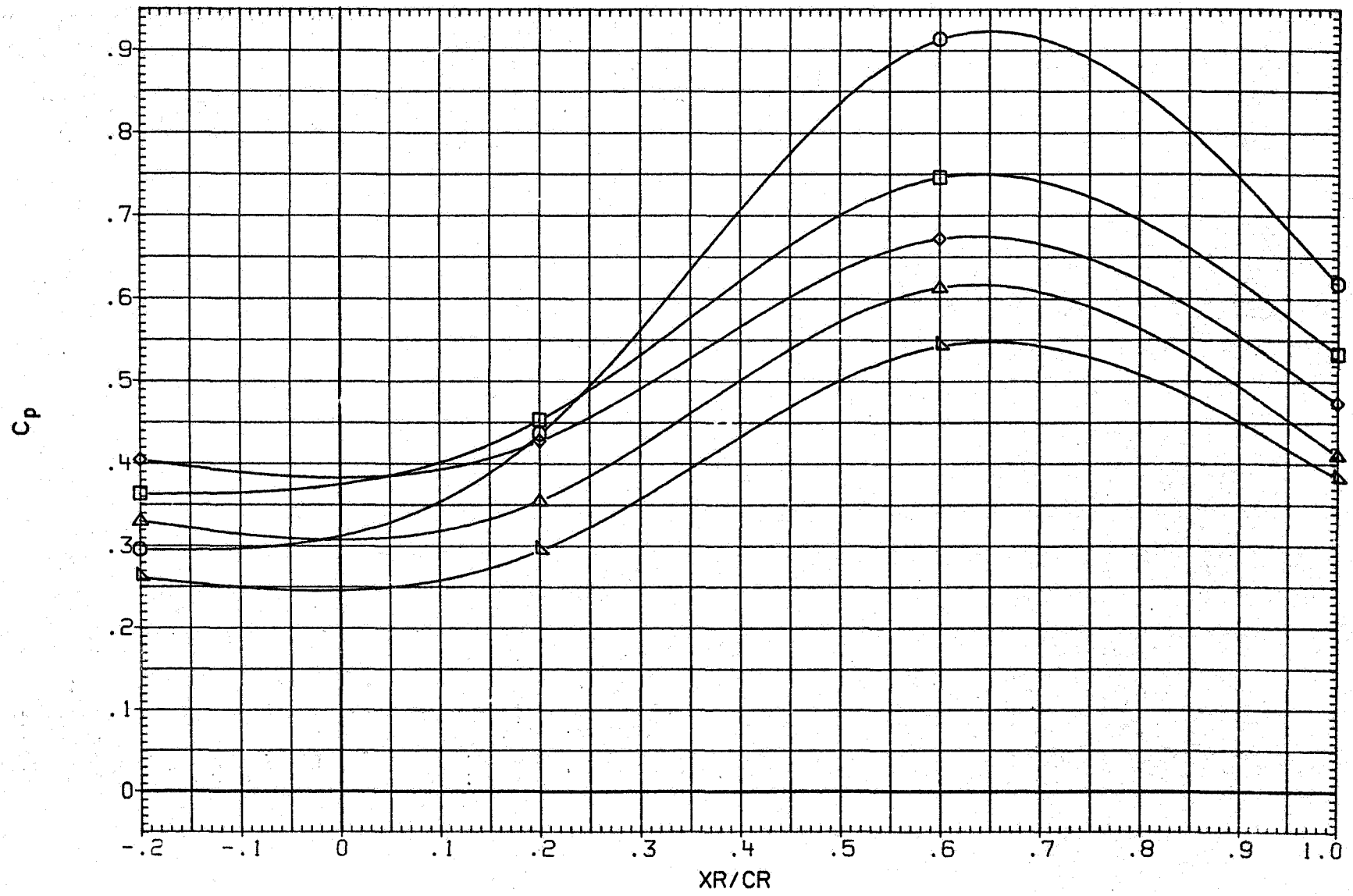

FIG 142 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	ZR/BR	MACH
○	.175	.900	3.000
□	5.049		
◇	10.118		
△	15.169		
◁	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

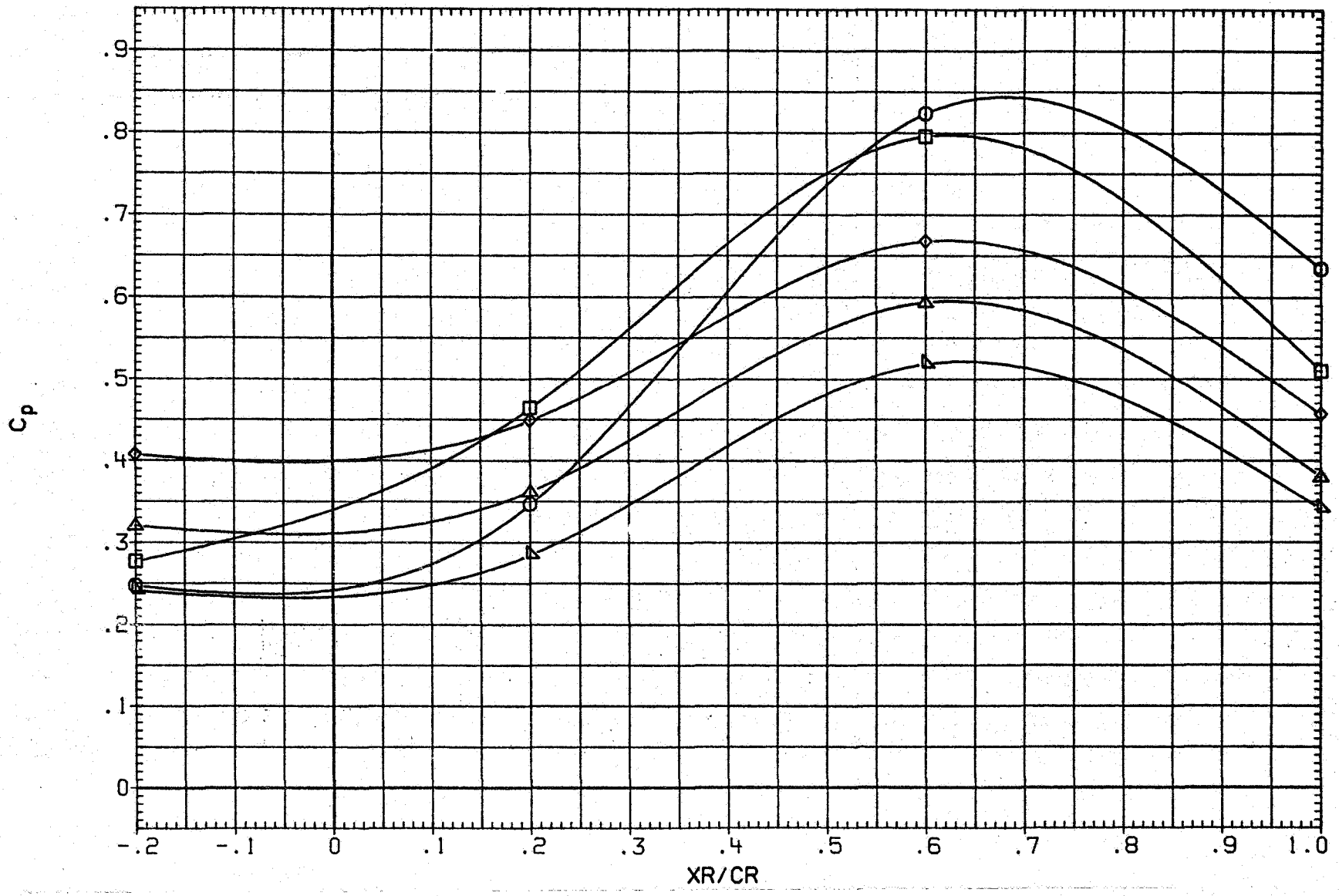

FIG 142 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW07) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.100	3.001
□	-2.116		
◇	.008		
△	2.137		
◁	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

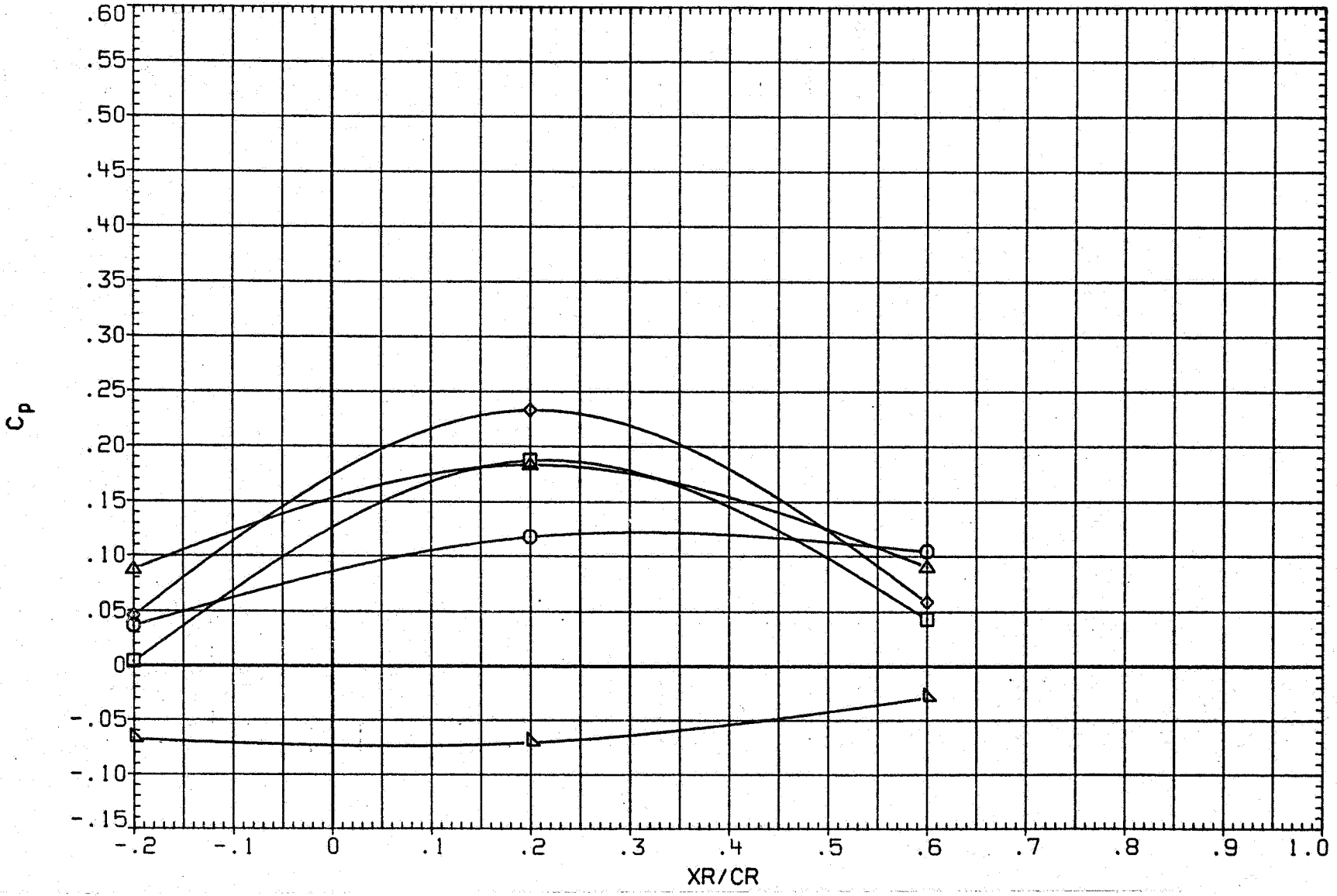

FIG 143 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.200	3.001
□	-2.116		
◇	.008		
△	2.137		
◁	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

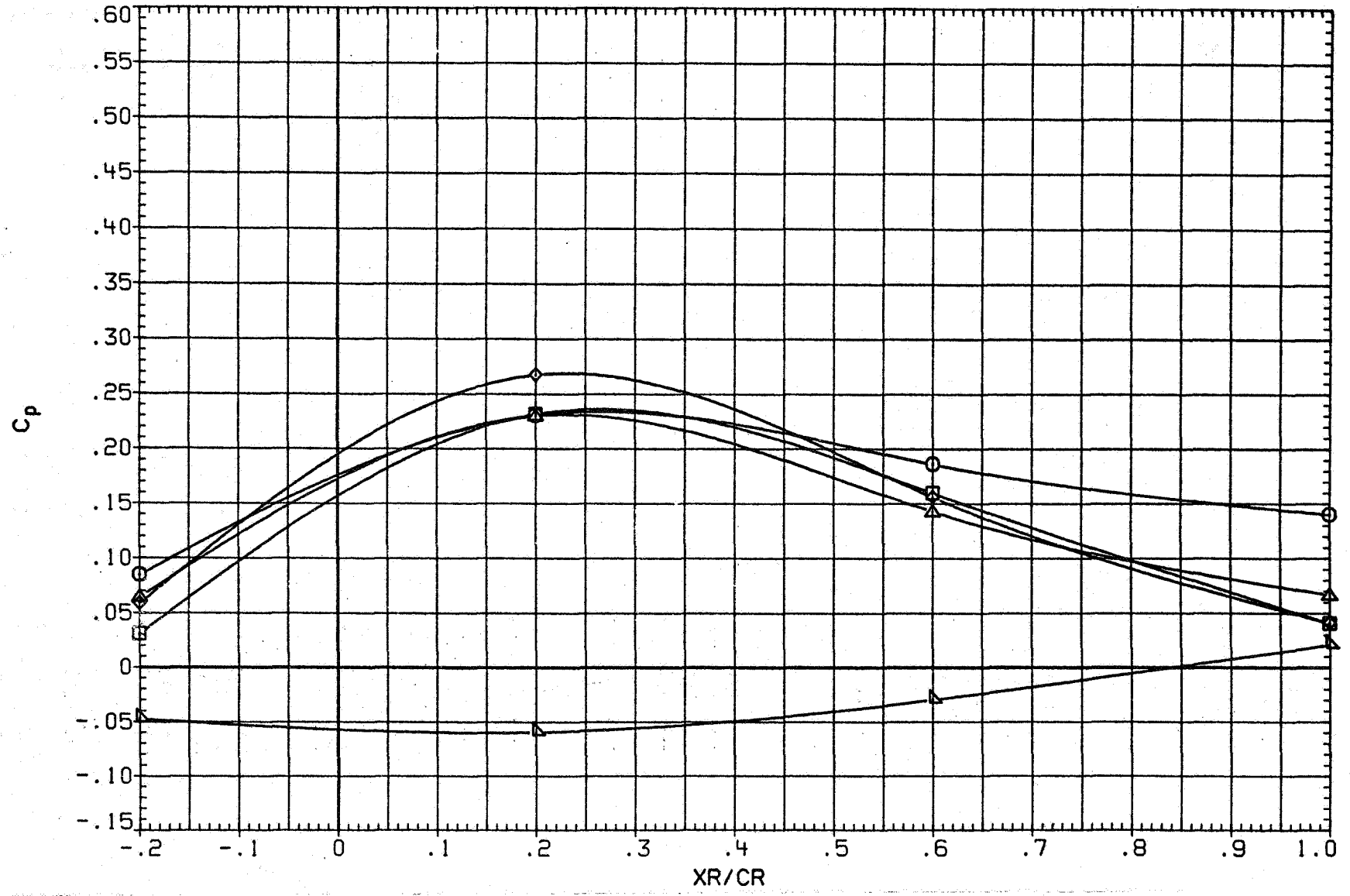

FIG 143 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.300	3.001
□	-2.116		
◇	.008		
△	2.137		
◺	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

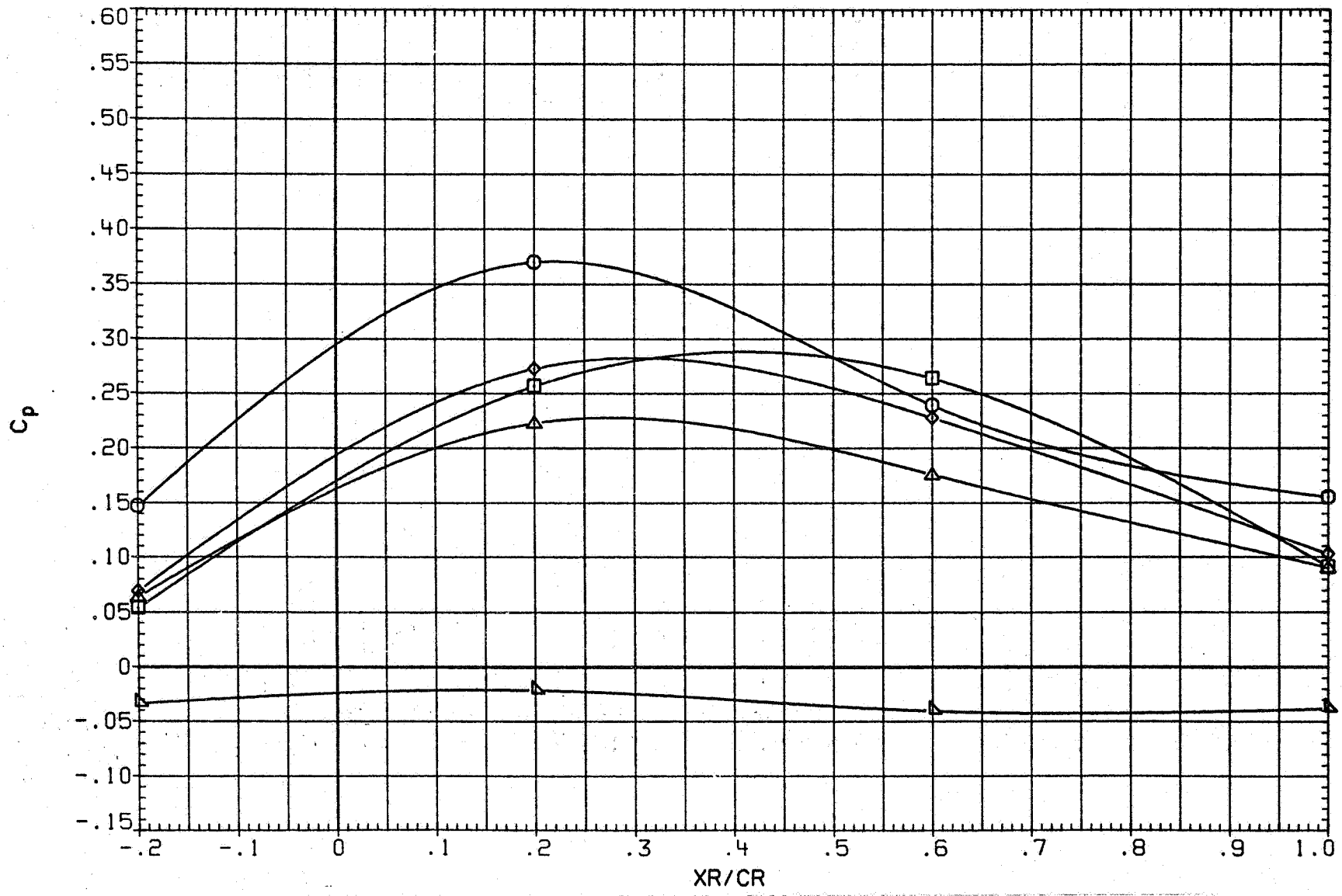

FIG 143 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.400	3.001
□	-2.116		
◇	.008		
△	2.137		
▷	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

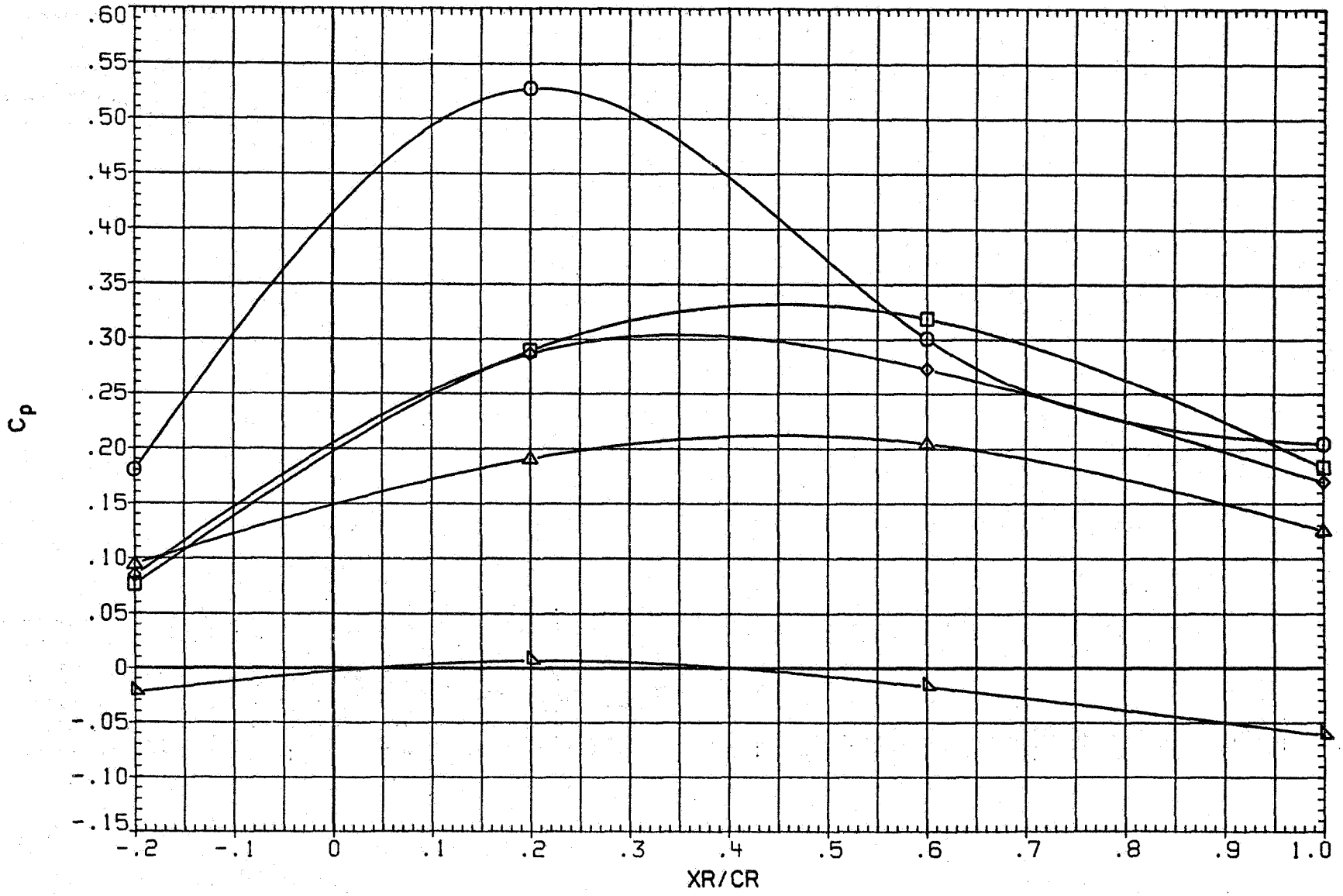

FIG 143 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.500	3.001
□	-2.116		
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△	2.137		
◺	6.366		

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ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

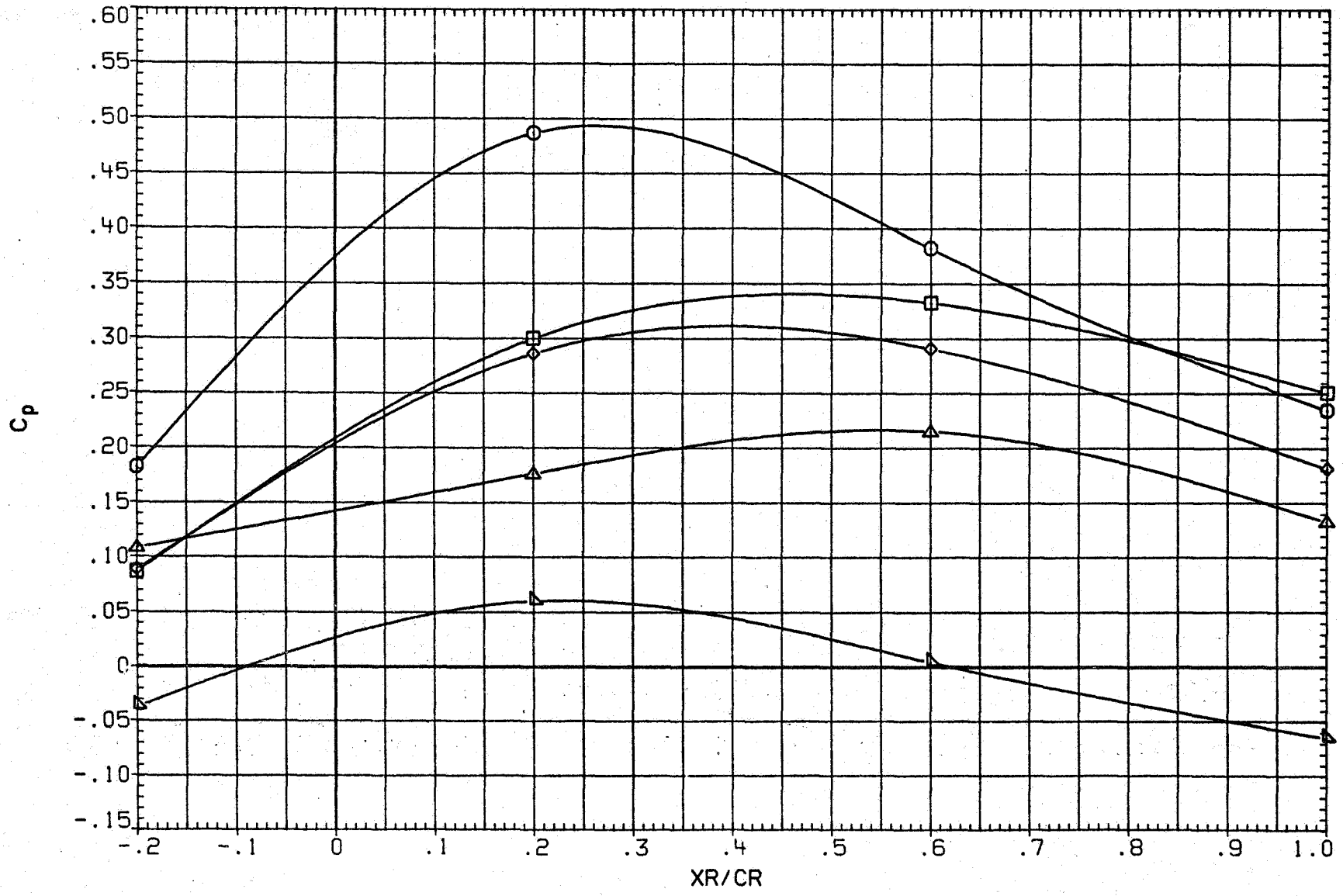

FIG 143 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.600	3.001
□	-2.116		
◇	.008		
△	2.137		
◺	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

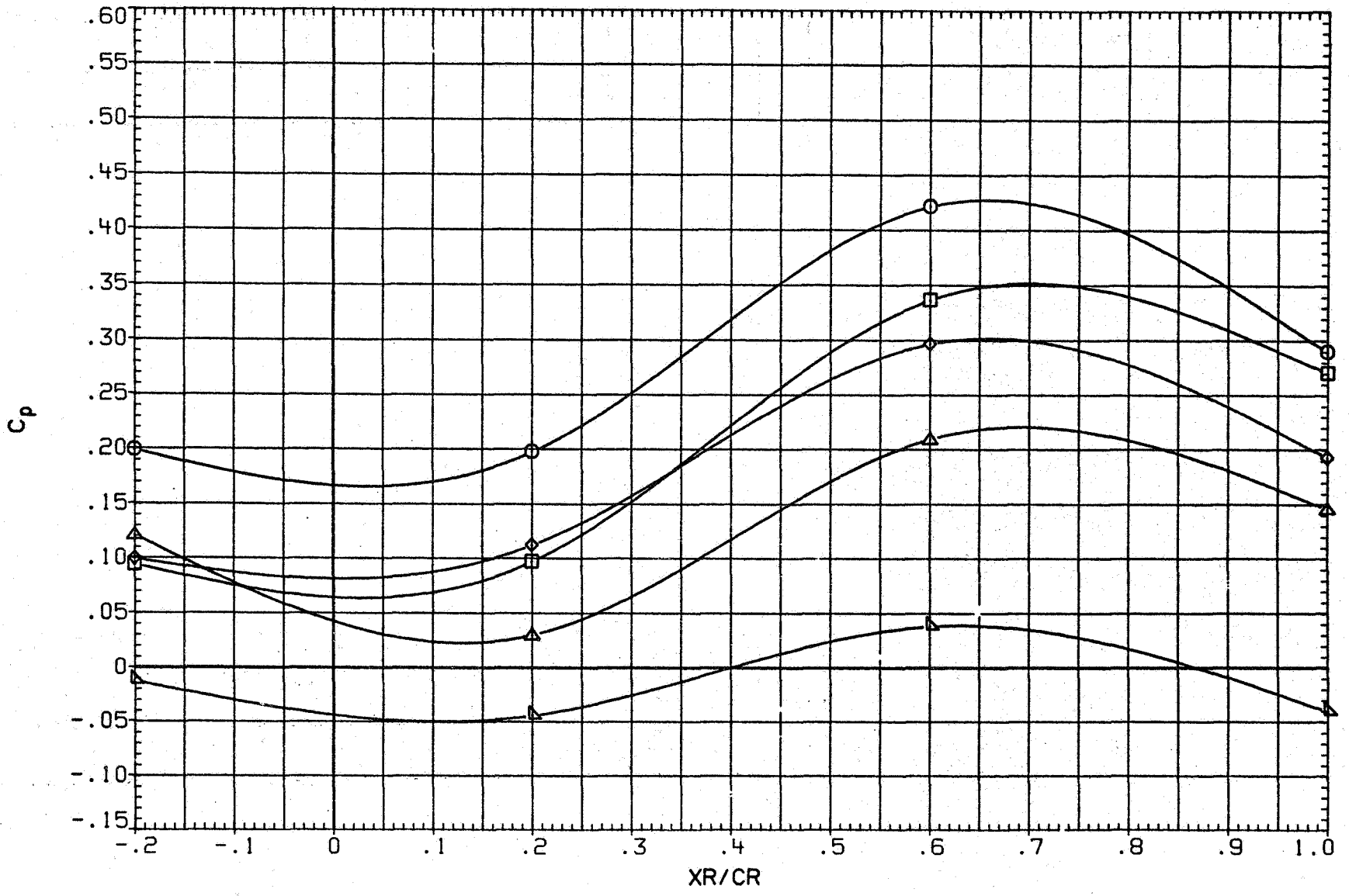

FIG 143 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.700	3.001
□	-2.116		
◇	.008		
△	2.137		
◁	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

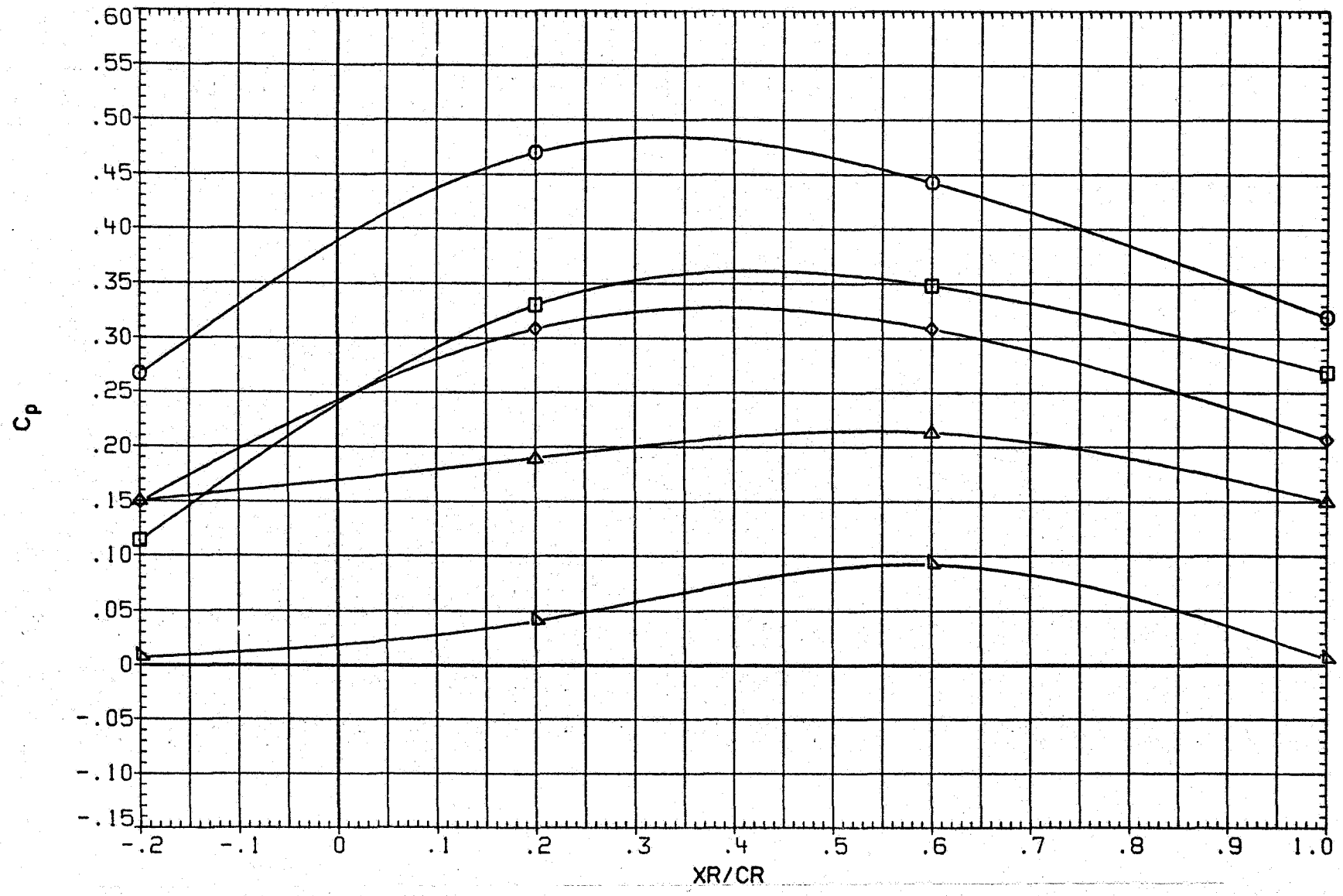

FIG 143 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.307	.800	3.001
□	-2.116		
◇	.008		
△	2.137		
◺	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

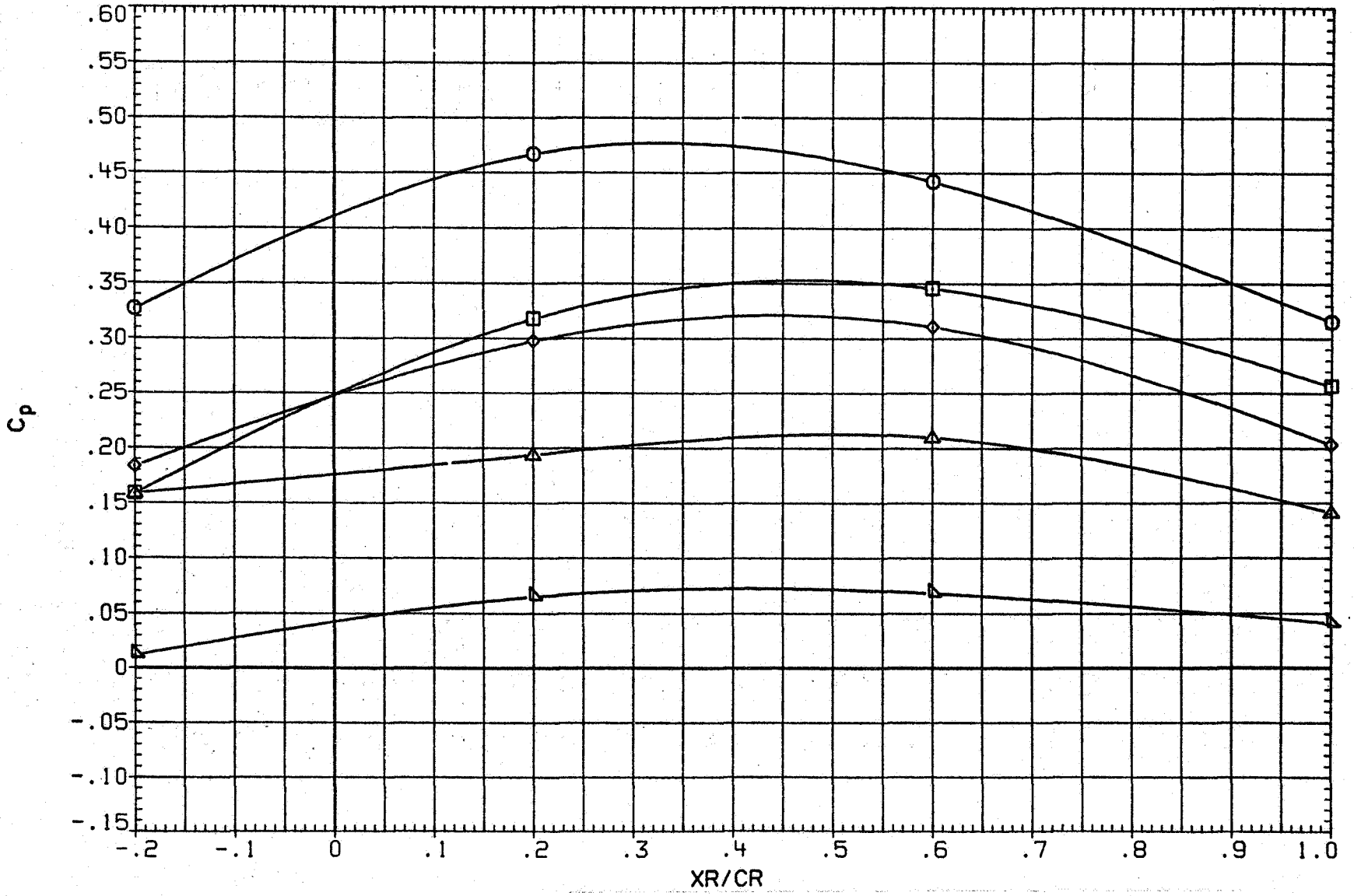

FIG 143 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
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◇	.008		
△	2.137		
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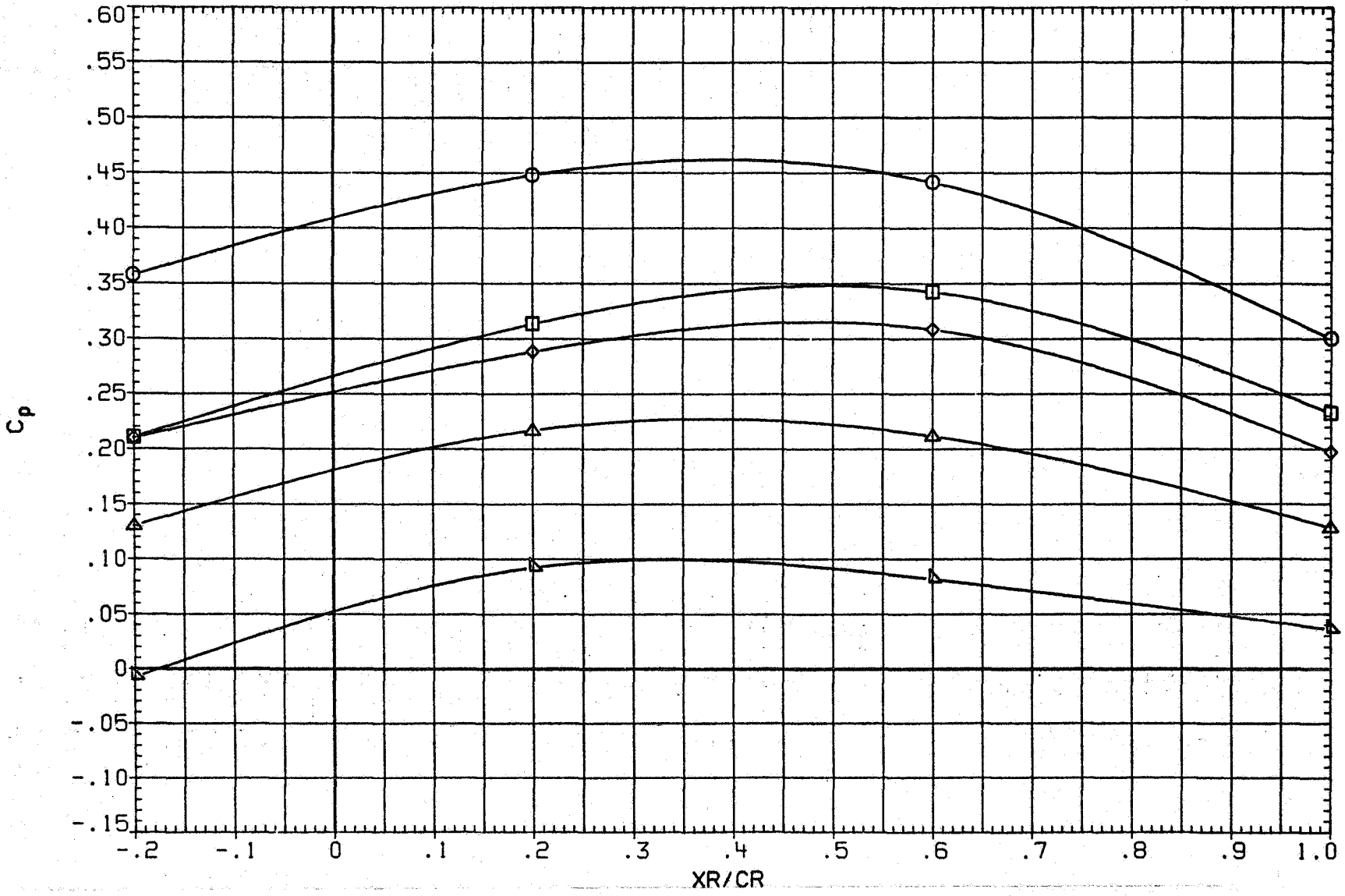

FIG 143 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW66) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.100	3.000
□	-2.123		
◇	-.009		
△	2.144		
▷	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

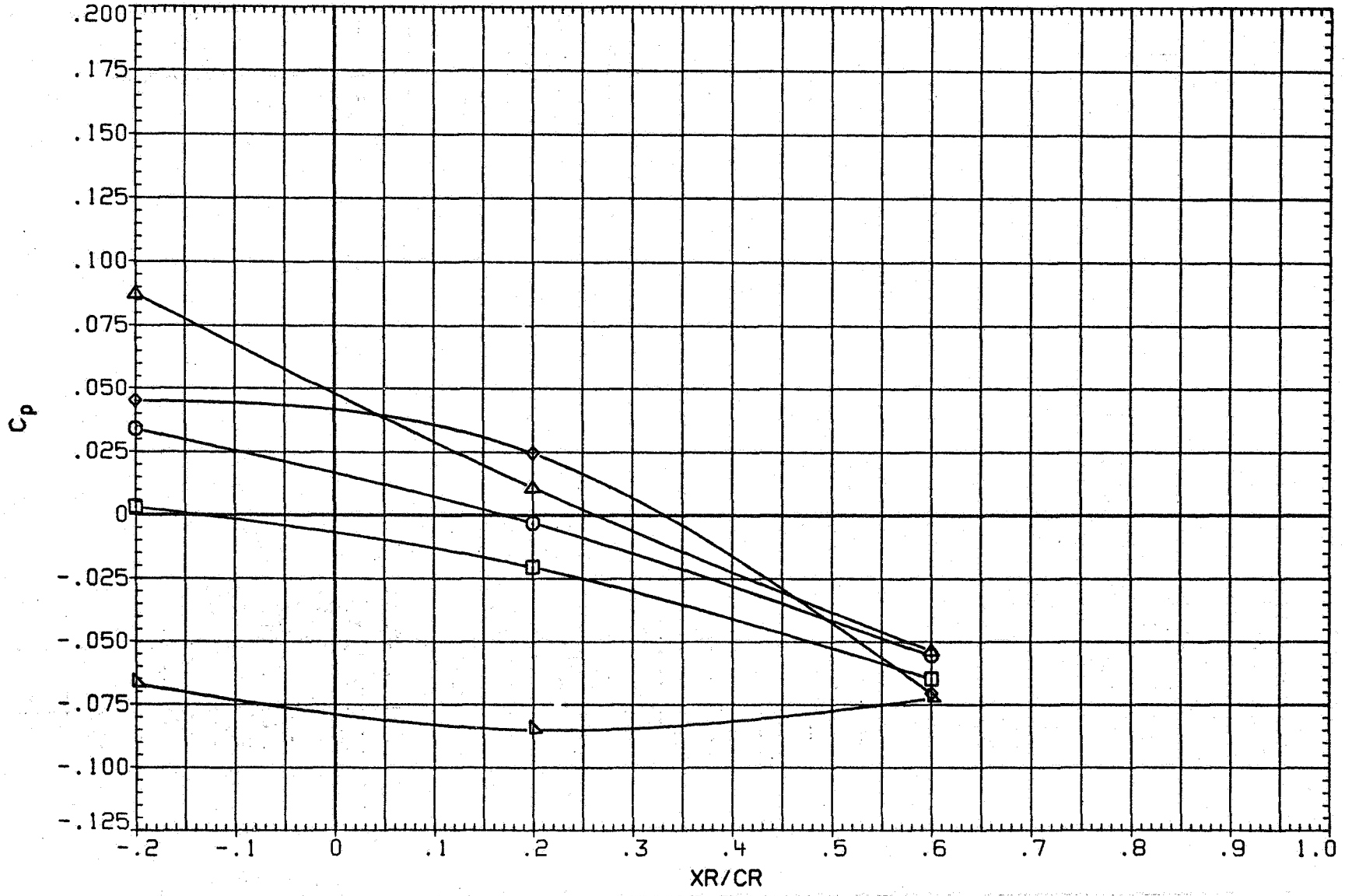

FIG 144 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.200	3.000
□	-2.123		
◇	-.009		
△	2.144		
◺	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

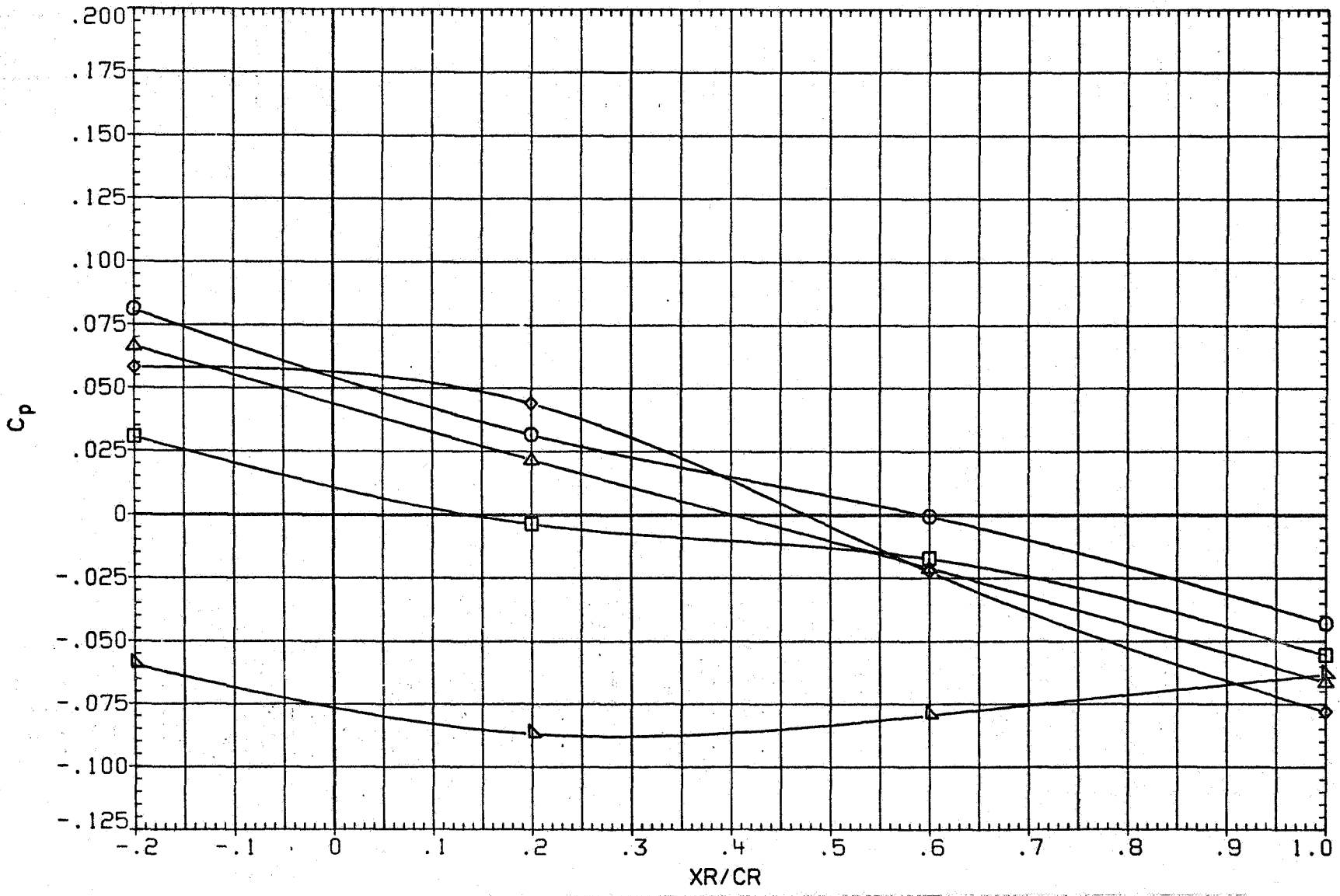

FIG 144 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.300	3.000
□	-2.123		
◇	-.009		
△	2.144		
◁	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

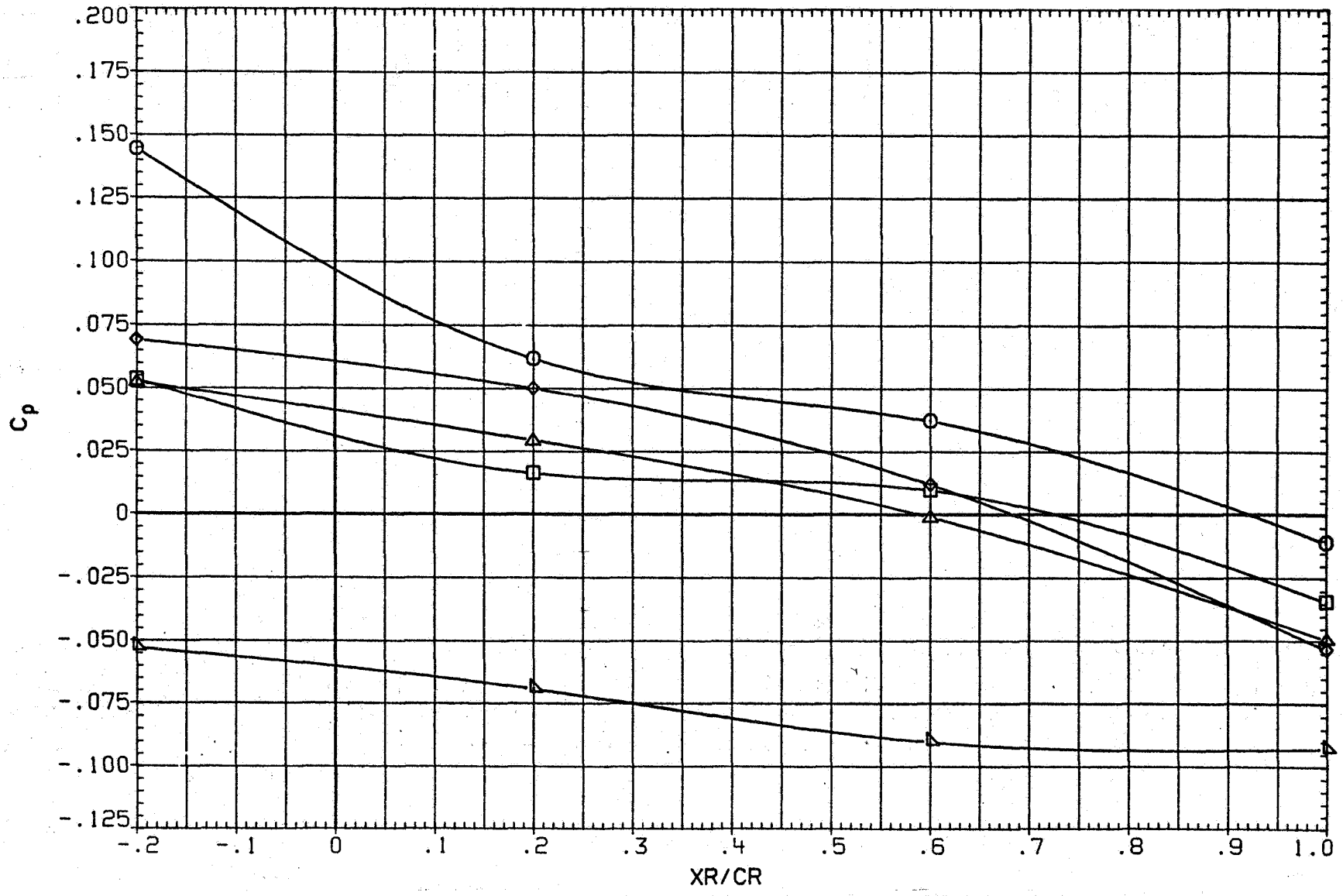

FIG 144 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.400	3.000
□	-2.123		
◇	-.009		
△	2.144		
◺	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

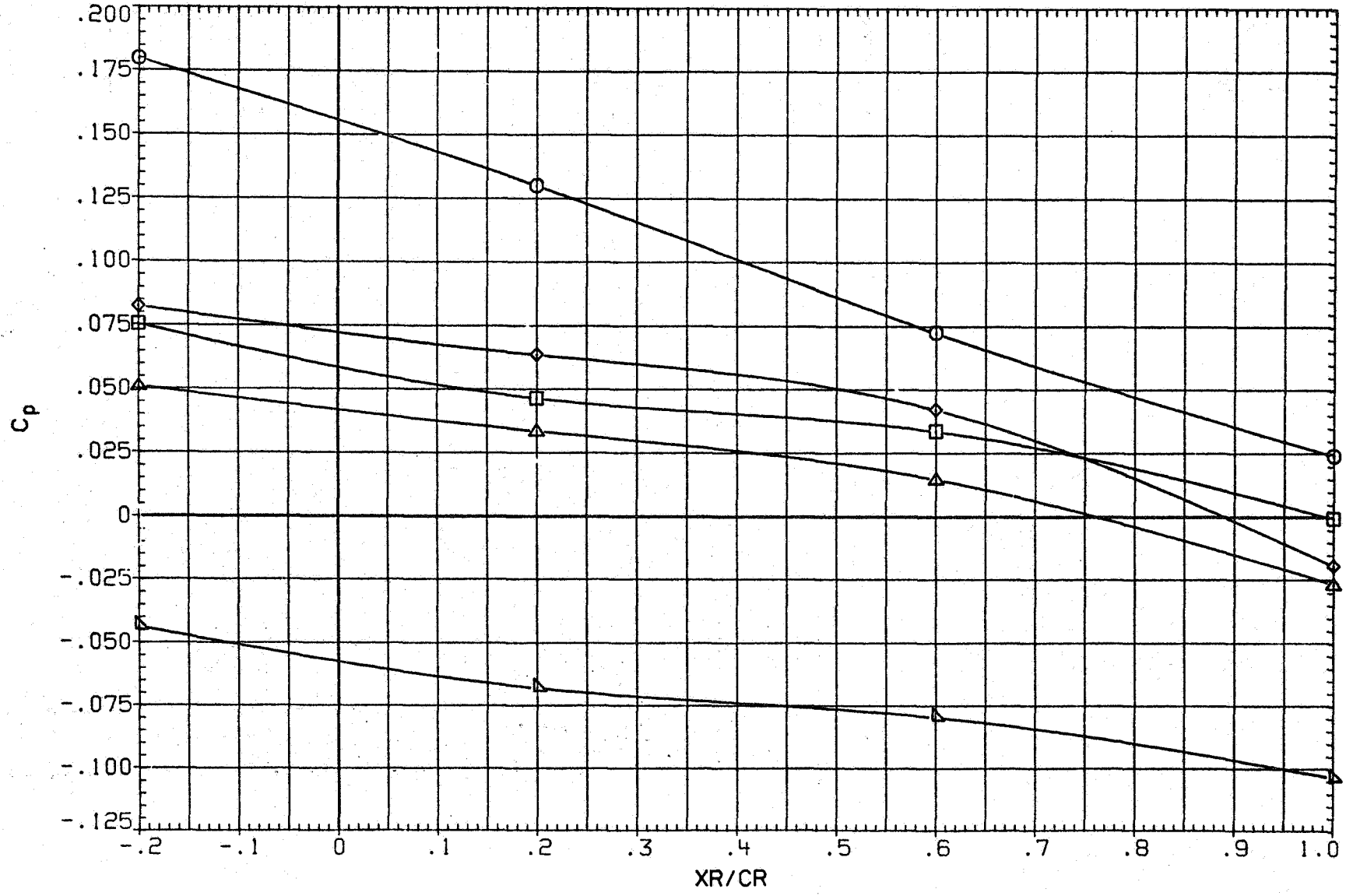

FIG 144 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.500	3.000
□	-2.123		
◇	-.009		
△	2.144		
◺	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

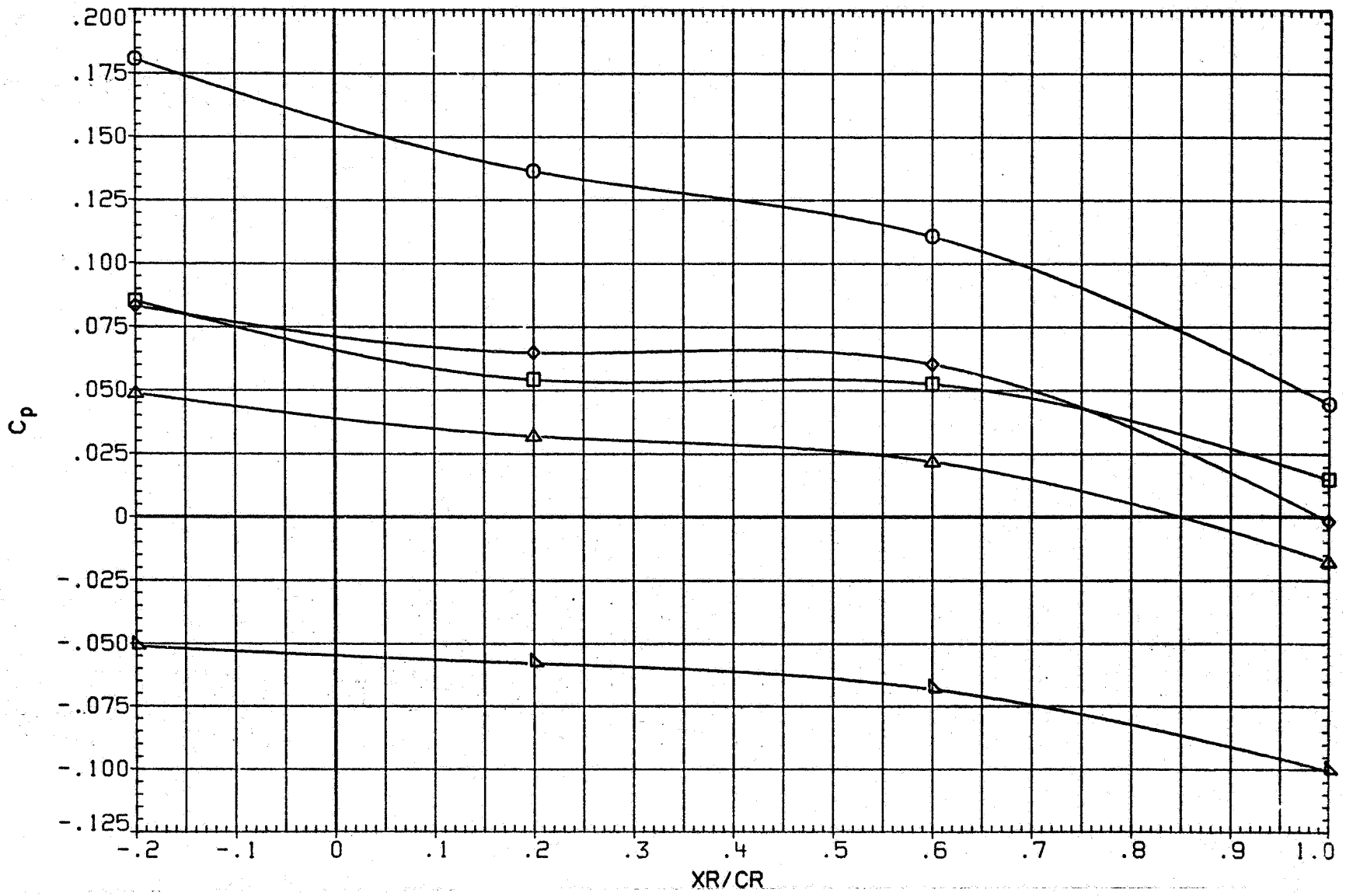

FIG 144 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.600	3.000
□	-2.123		
◇	-.009		
△	2.144		
▽	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

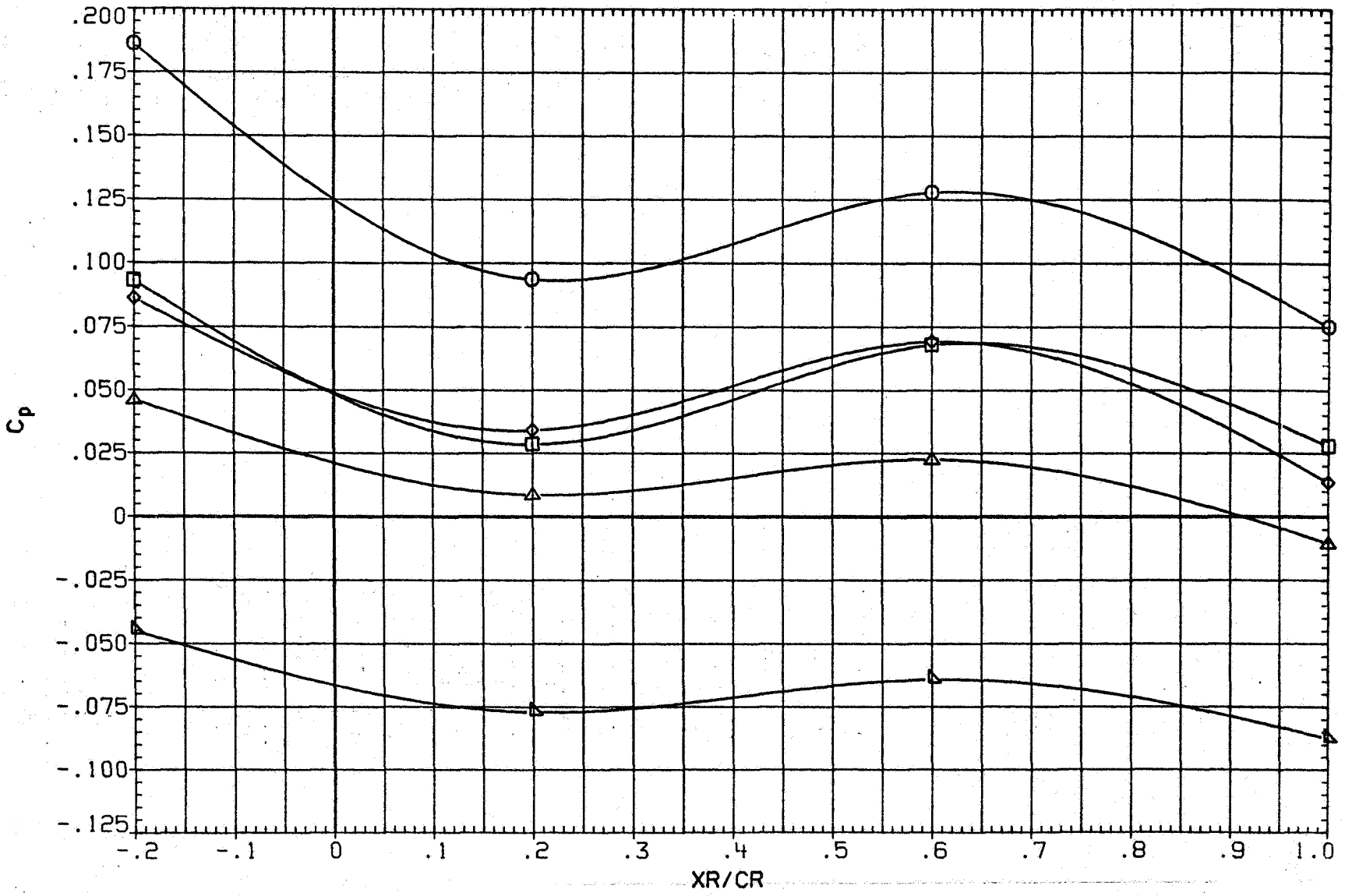

FIG 144 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.700	3.000
□	-2.123		
◇	-.009		
△	2.144		
◁	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

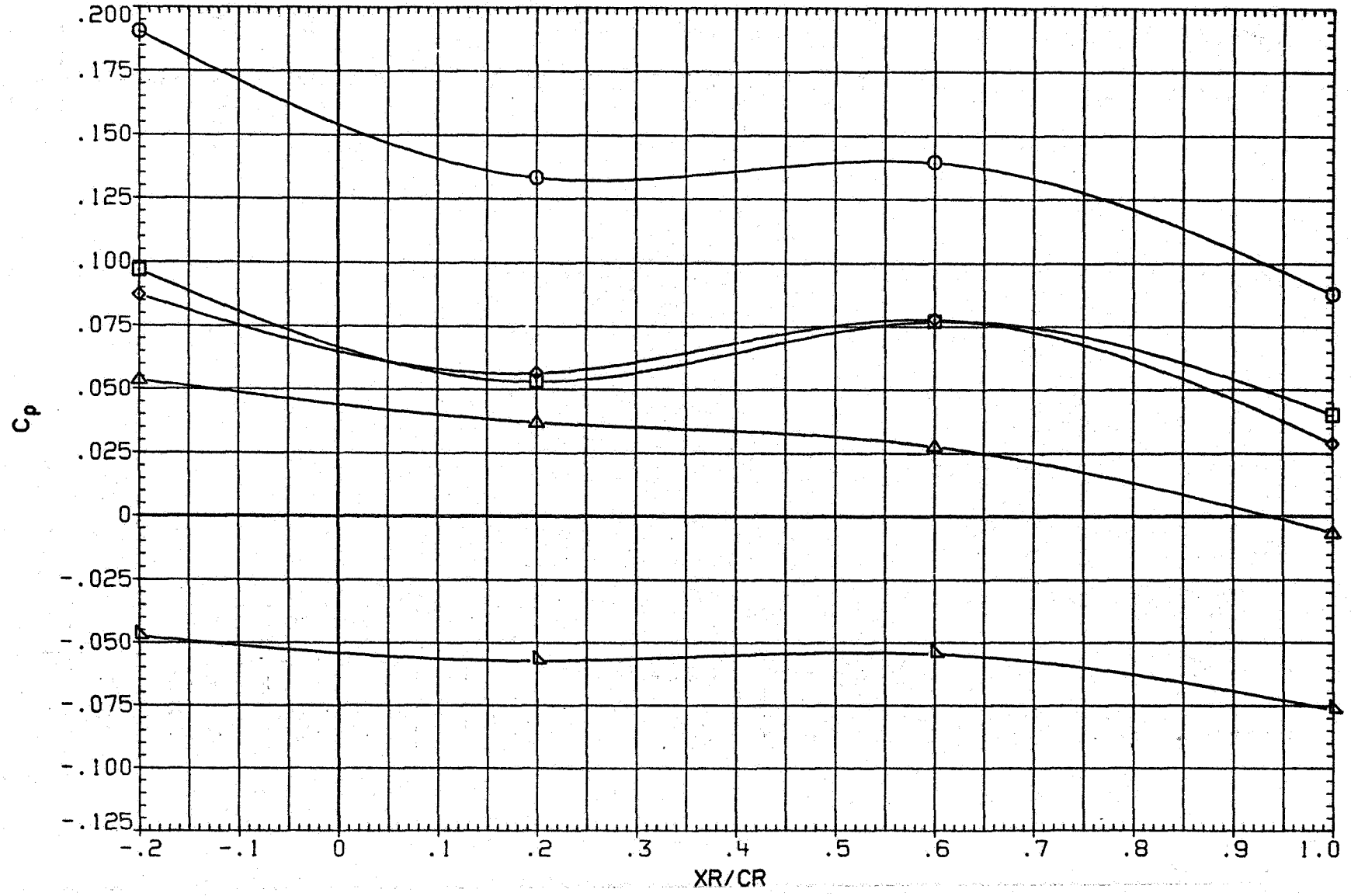

FIG 144 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.800	3.000
□	-2.123		
◇	-.009		
△	2.144		
▷	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

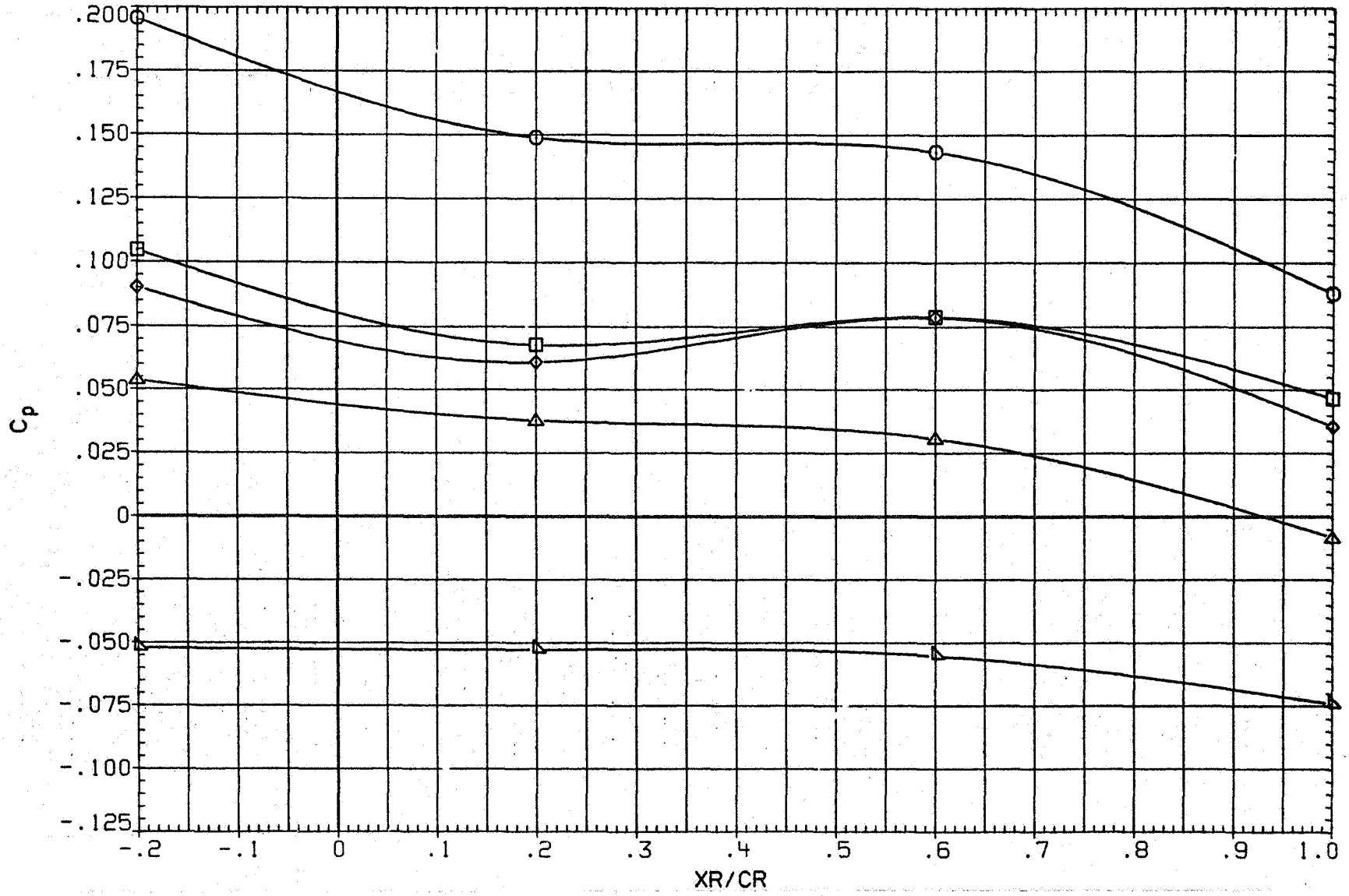

FIG 144 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.323	.900	3.000
□	-2.123		
◇	-.009		
△	2.144		
◺	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

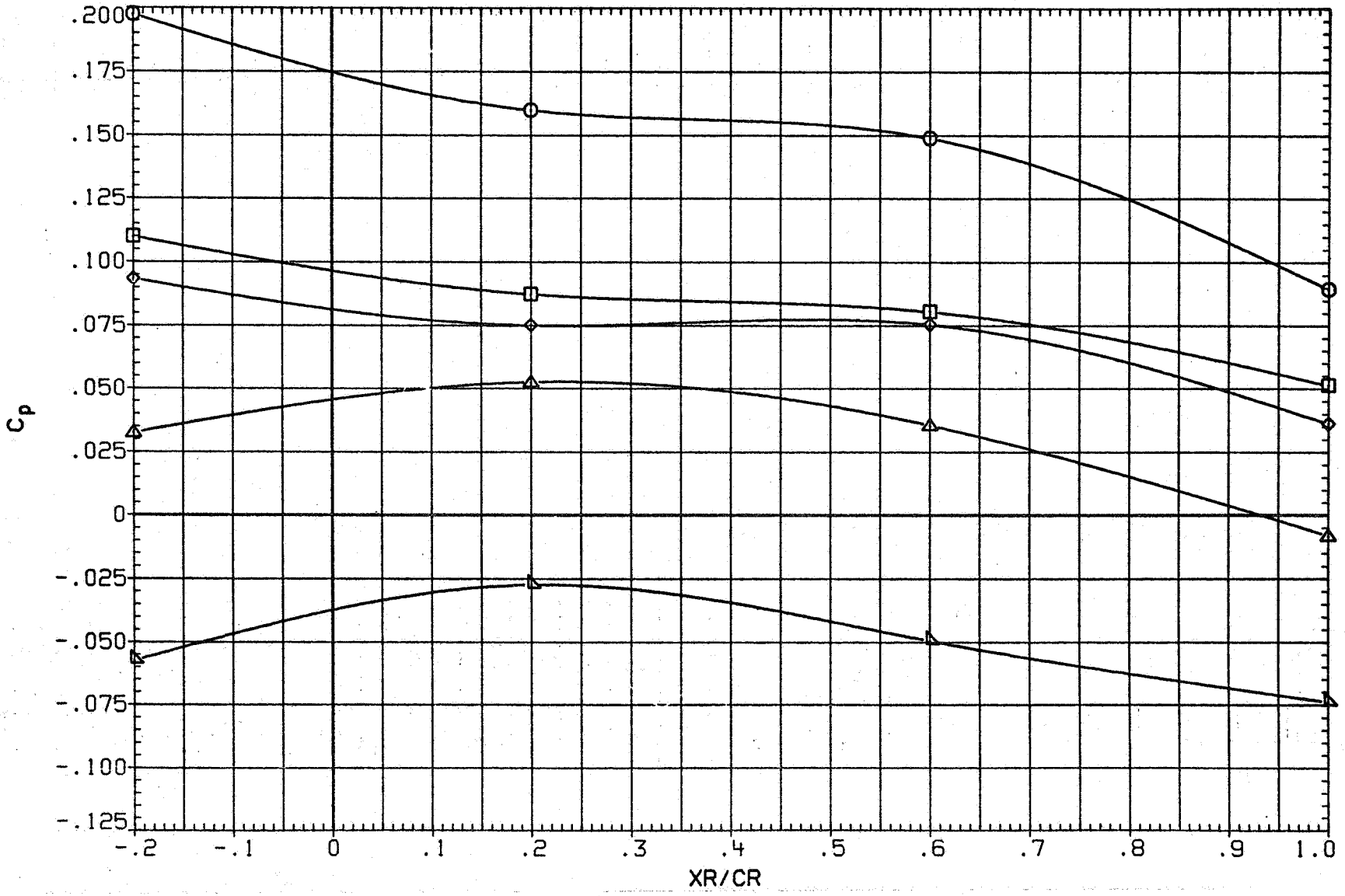

FIG 144 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW96) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.100	3.000
□	-2.179		
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

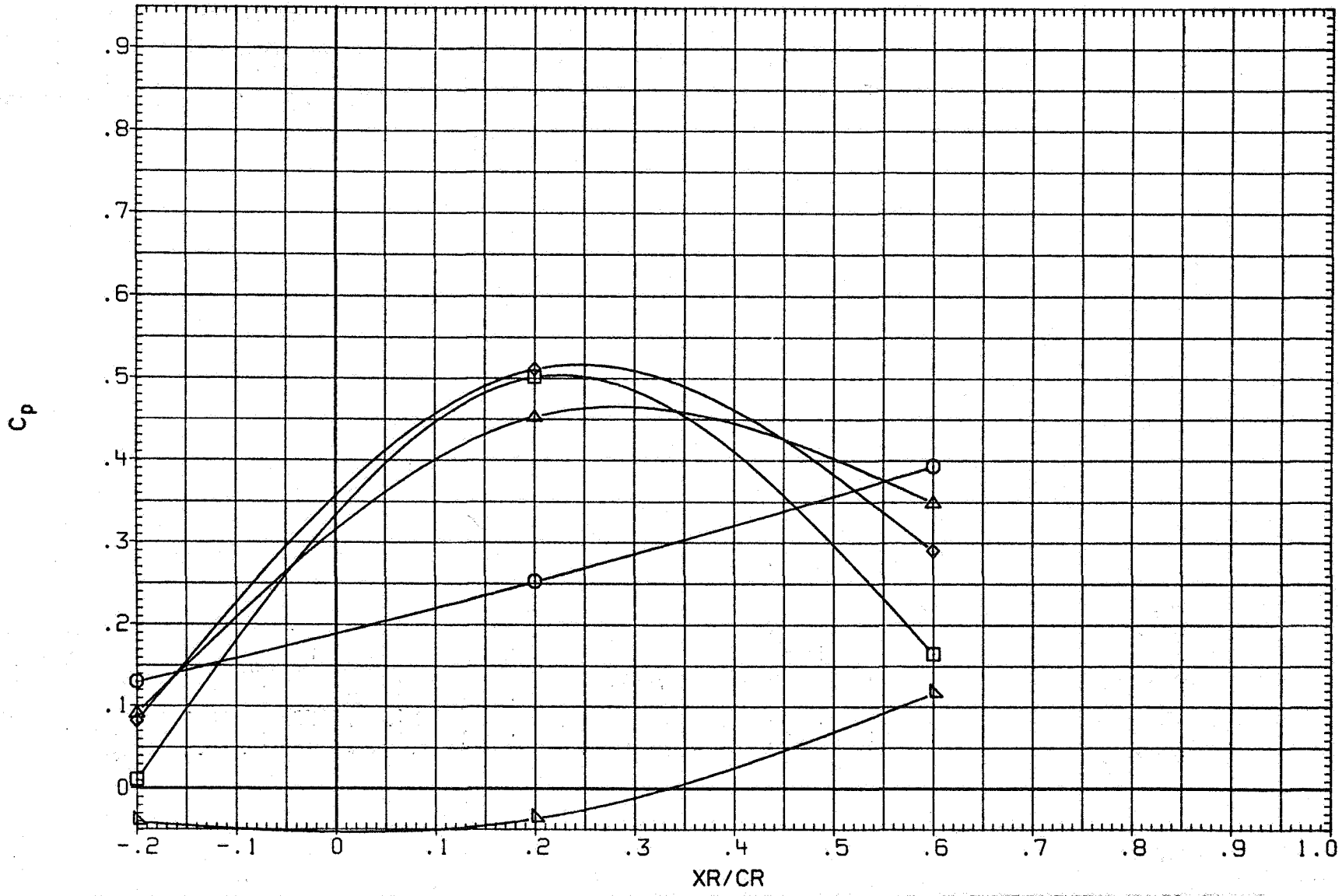

FIG 145 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.200	3.000
□	-2.179		
◇	-.058		
△	2.075		
◺	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

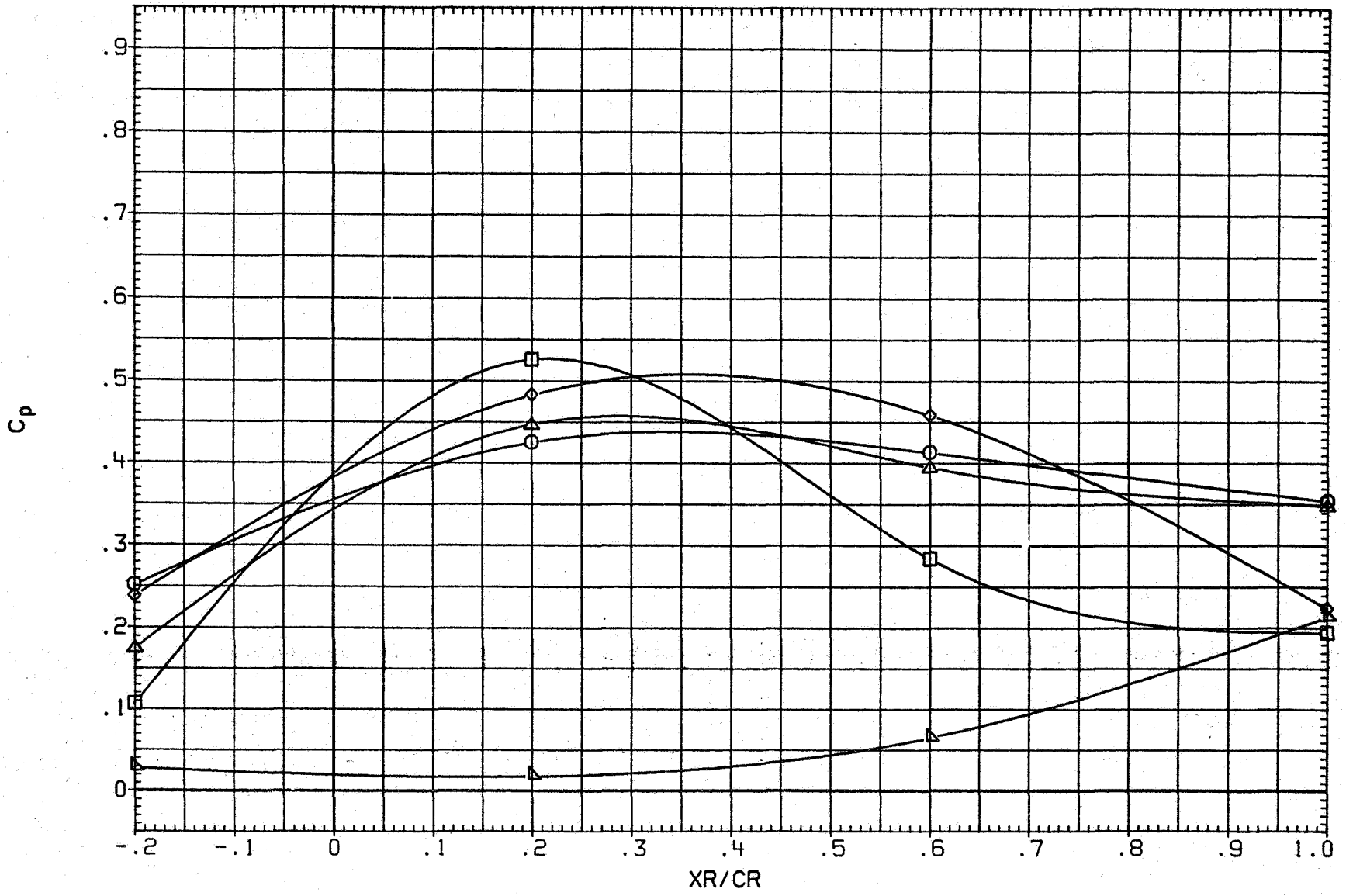

FIG 145 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.300	3.000
□	-2.179		
◇	-.058		
△	2.075		
⊿	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

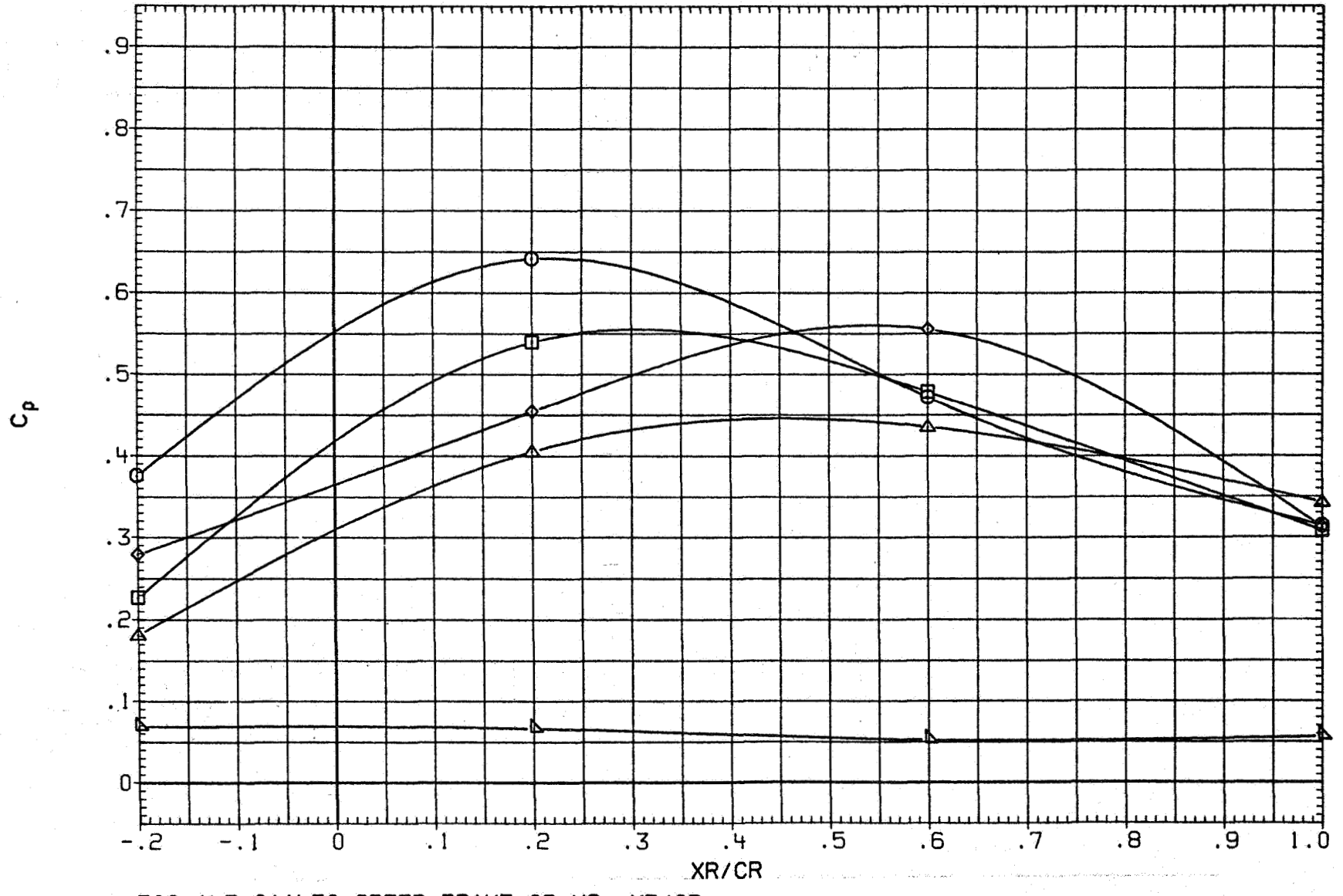

FIG 145 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.400	3.000
□	-2.179		
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

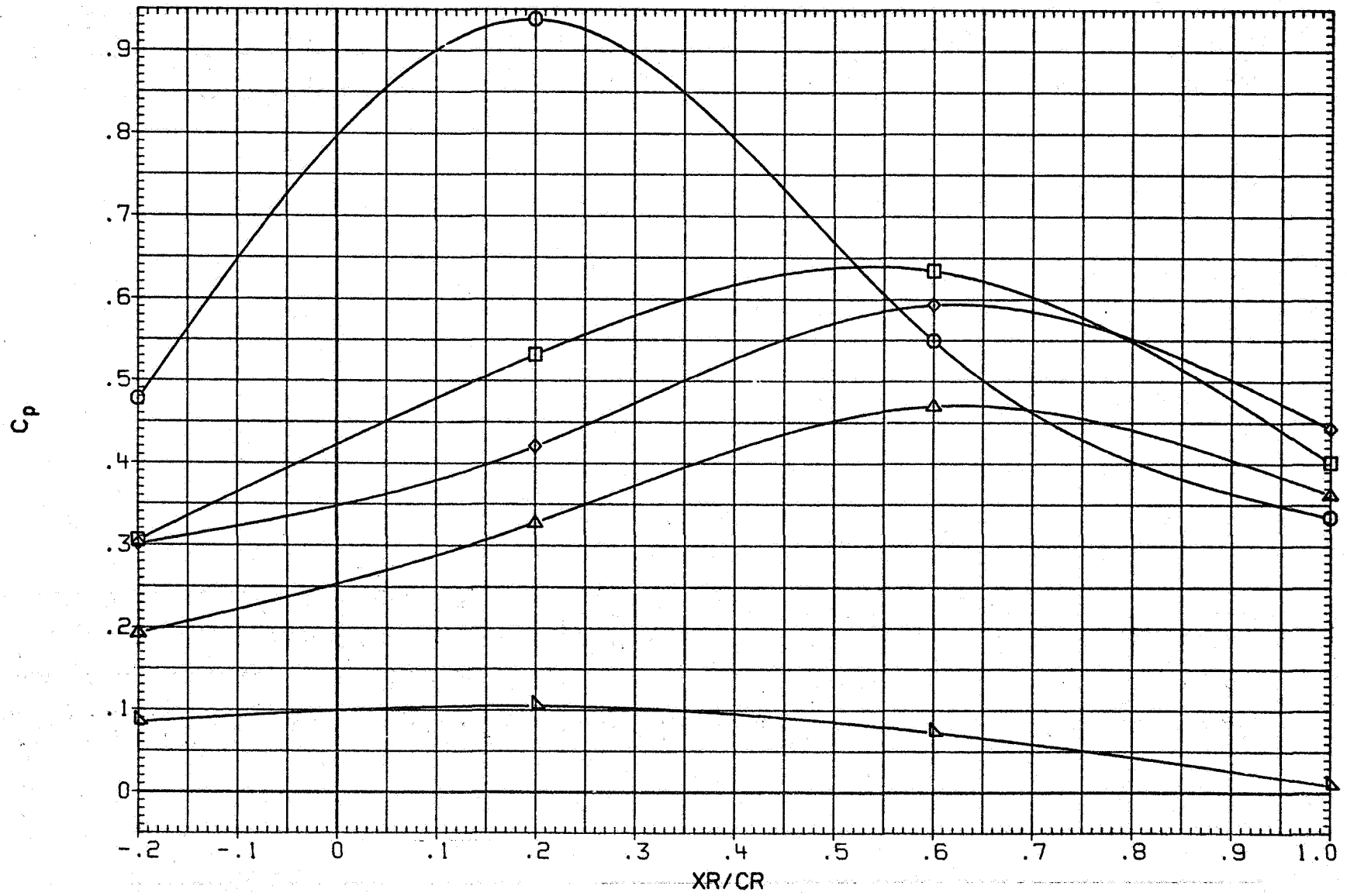

FIG 145 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.500	3.000
□	-2.179		
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

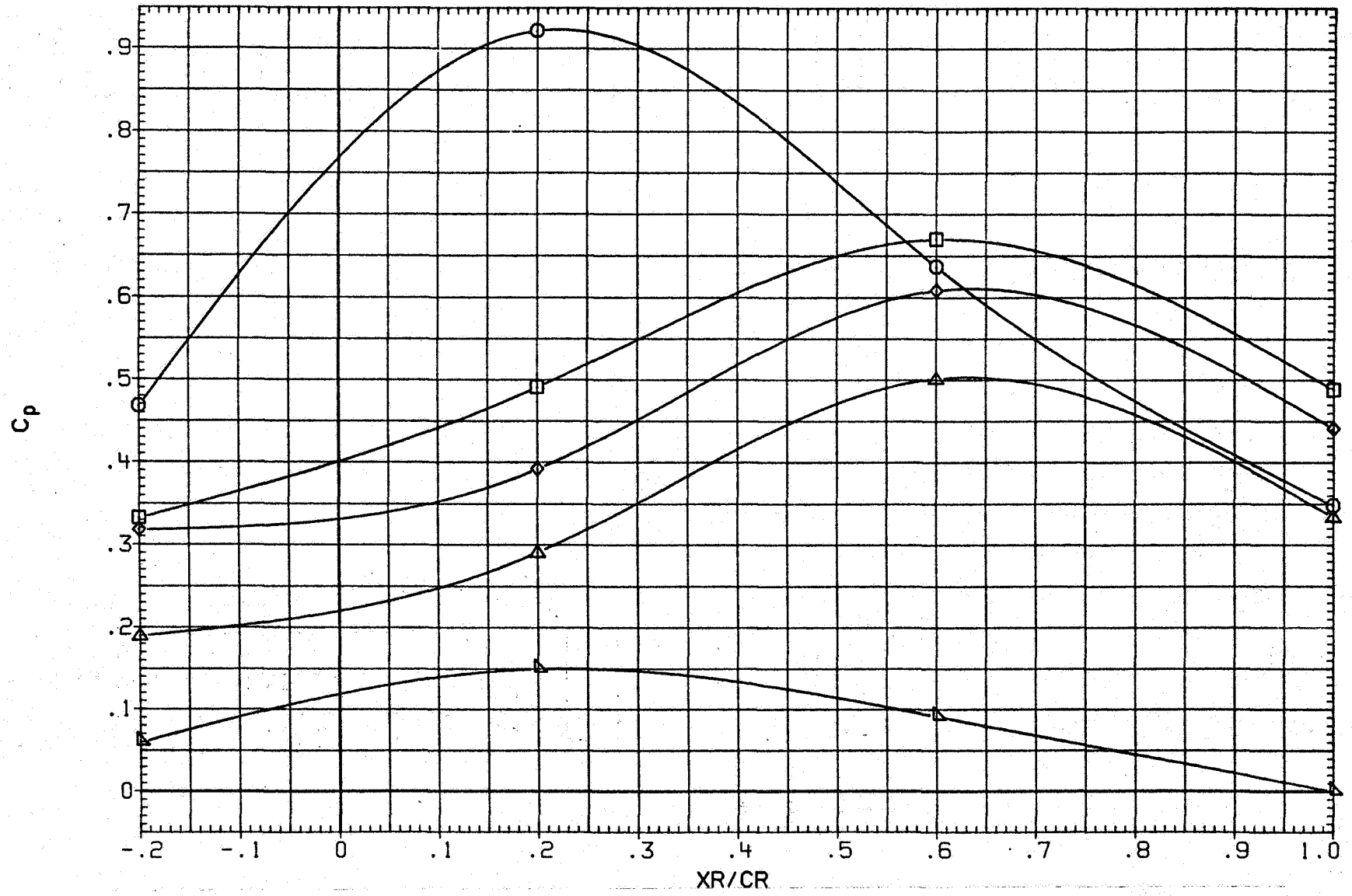

FIG 145 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.600	3.000
□	-2.179		
◇	-.058		
△	2.075		
◺	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

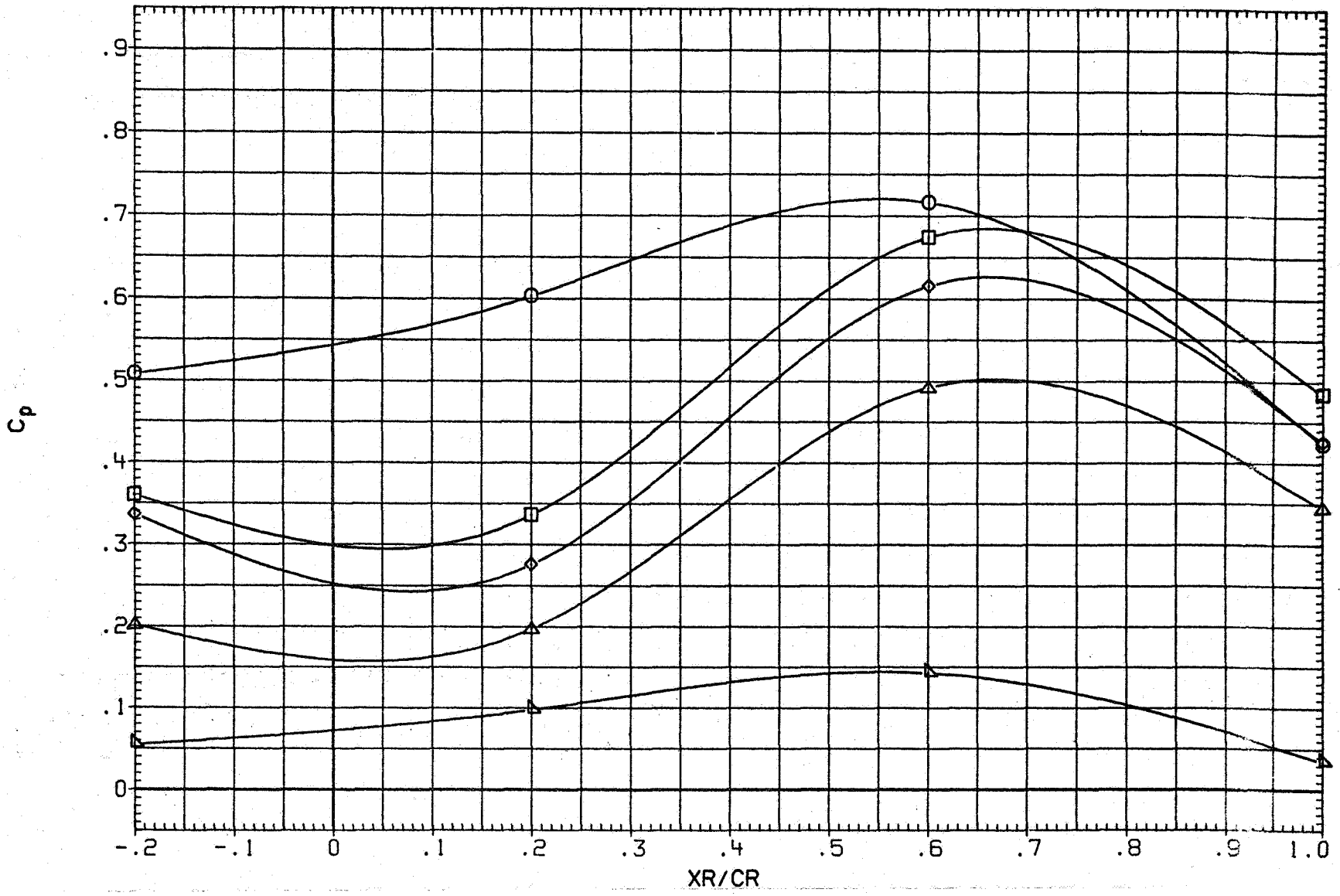

FIG 145 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.700	3.000
□	-2.179		
◇	-.058		
△	2.075		
◺	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

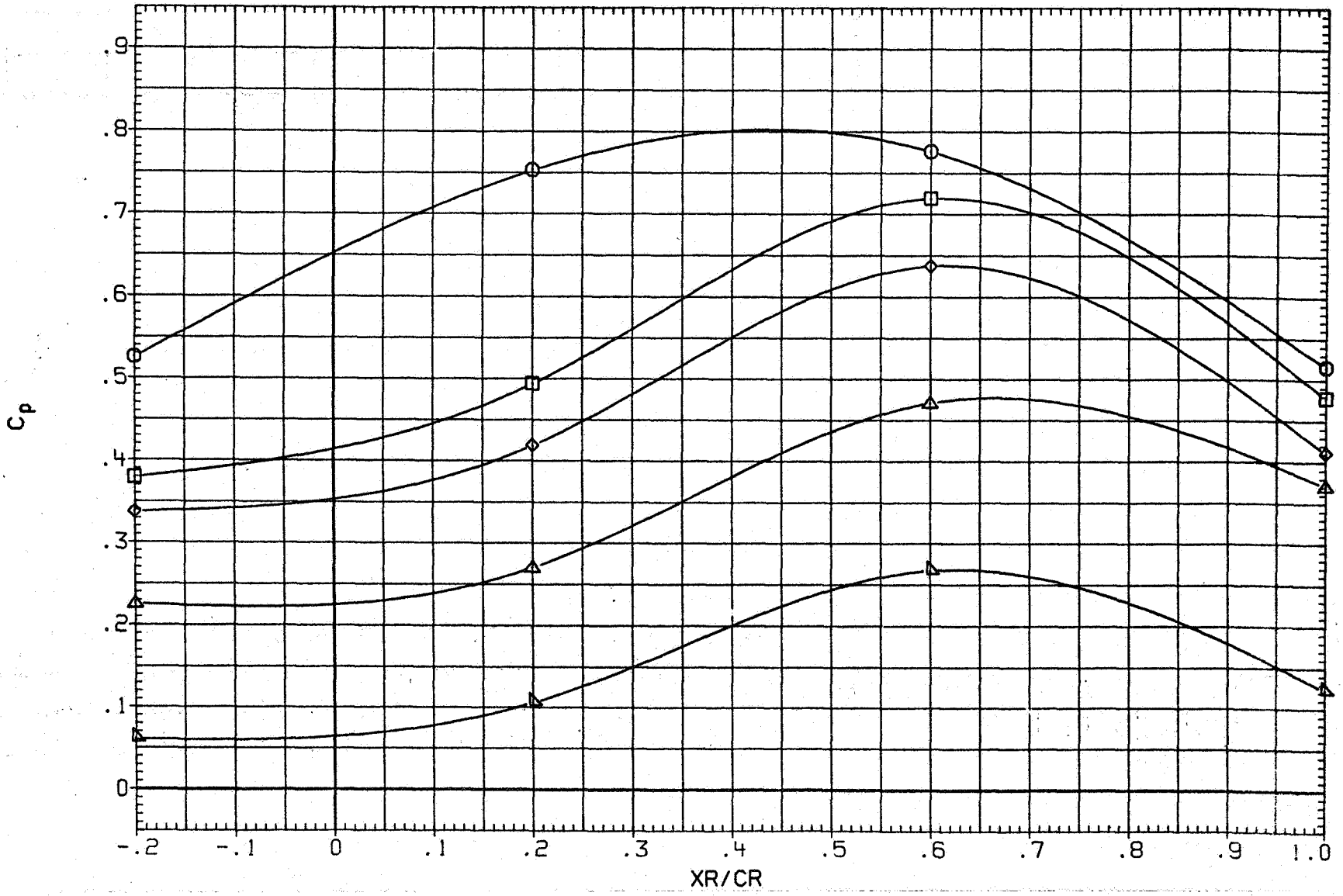

FIG 145 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.800	3.000
□	-2.179		
◇	-.058		
△	2.075		
◺	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

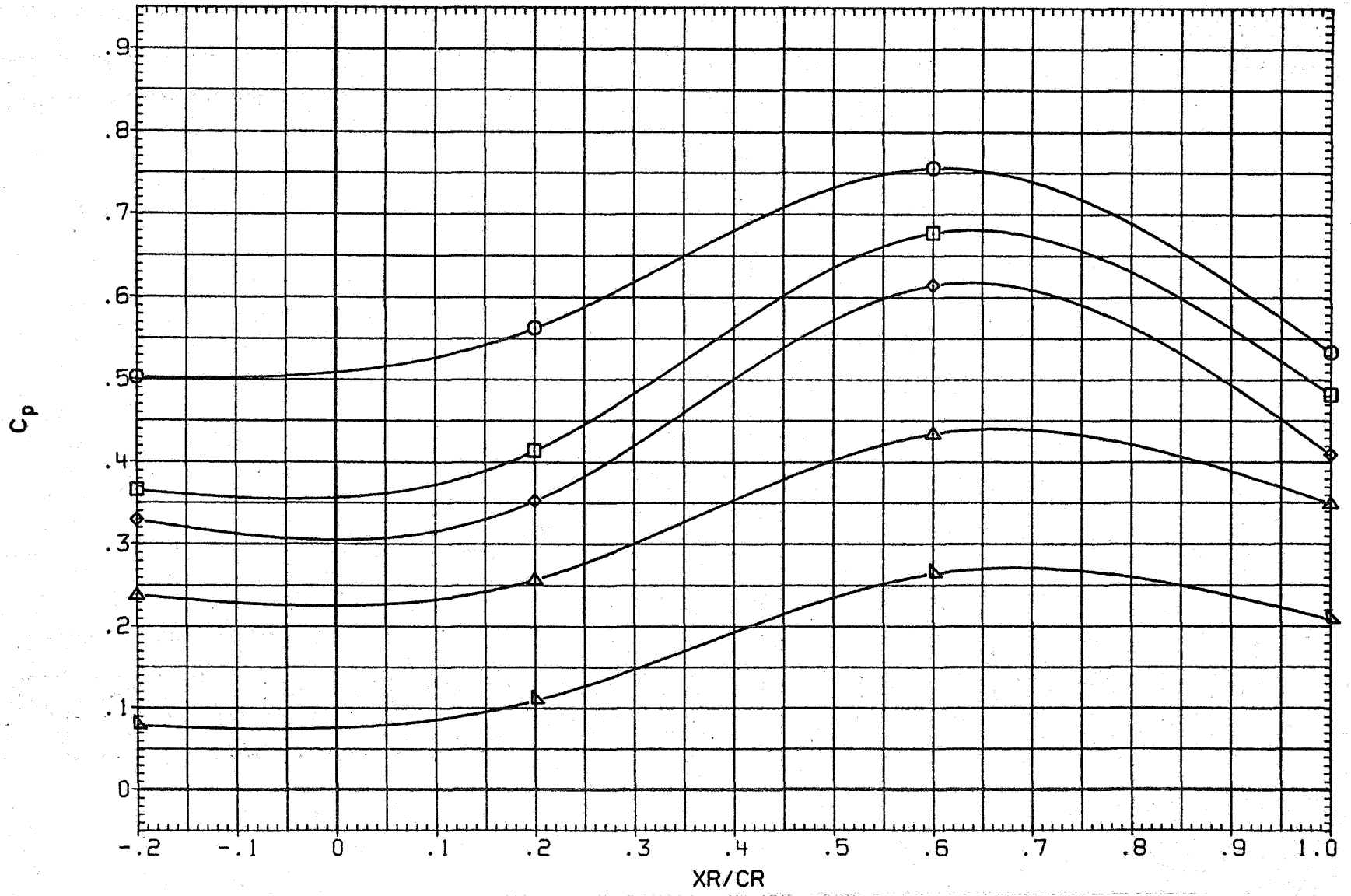

FIG 145 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	ZR/BR	MACH
○	-6.387	.900	3.000
□	-2.179		
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

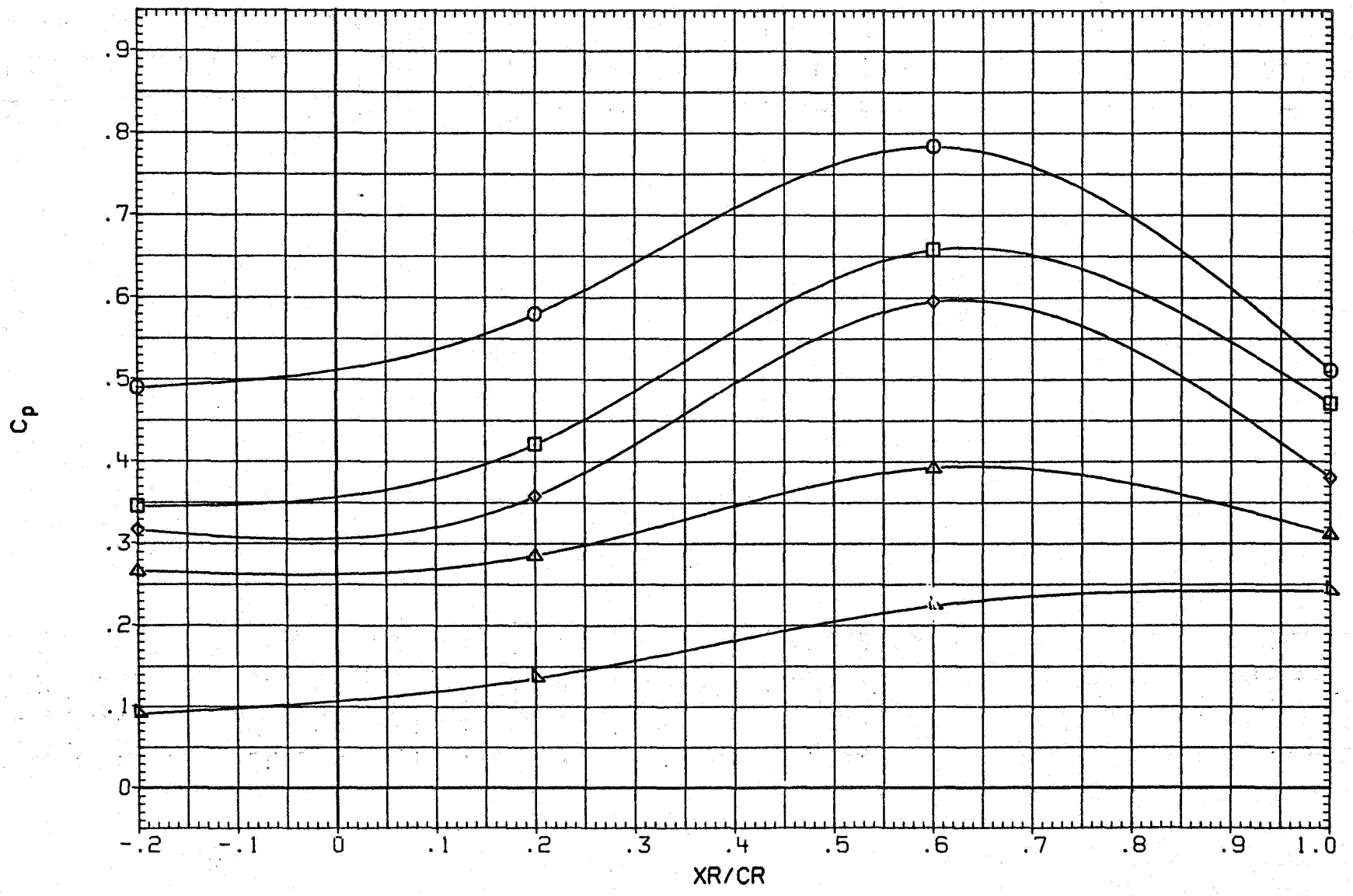

FIG 145 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW49) AMES 118-1-11 OA145C 01

RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.100	3.000
□	-9.485		
◇	-4.946		
△	.036		
◪	4.978		
▱	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

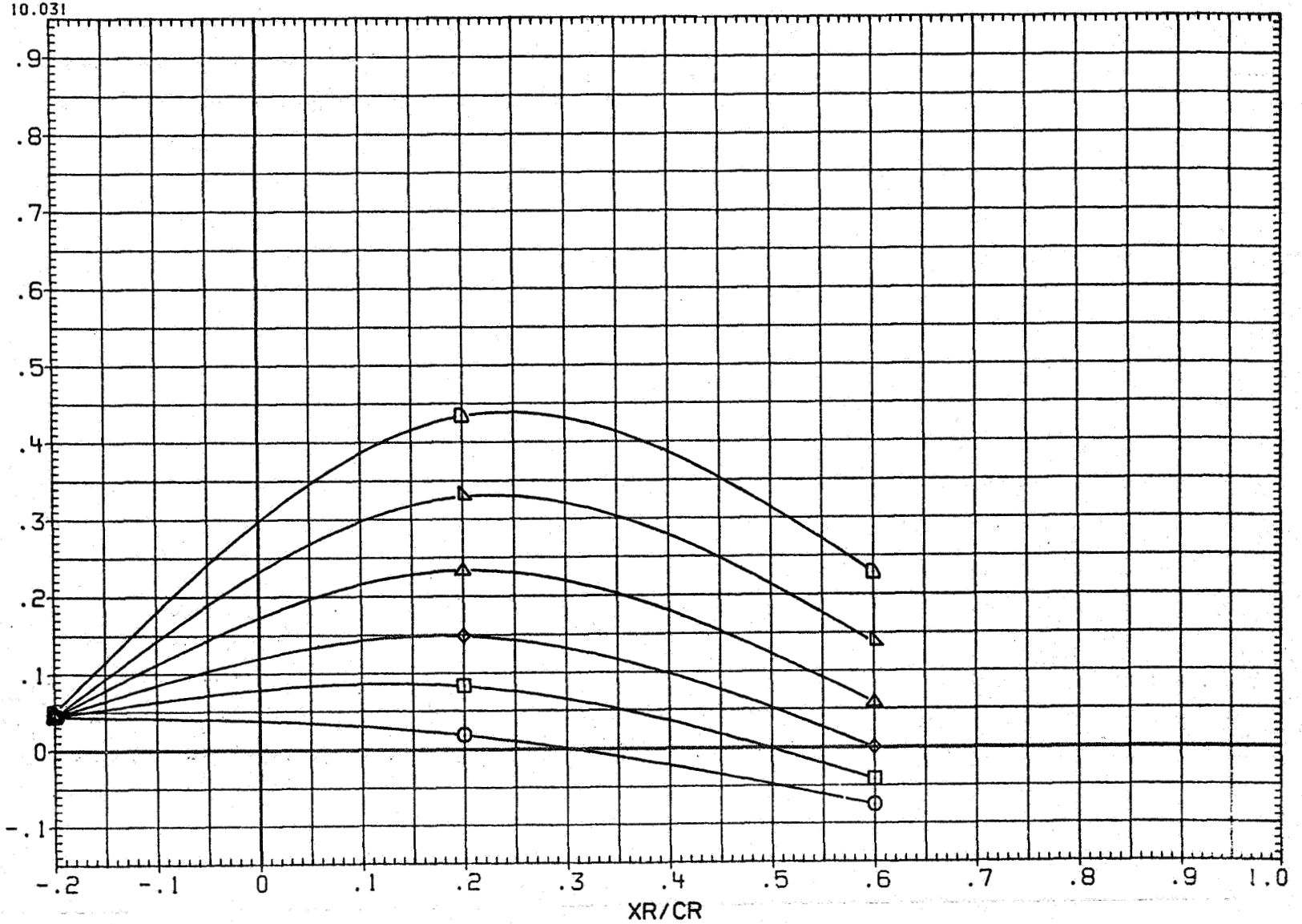

FIG 146 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW49) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.200	3.000
□	-9.485		
◇	-4.946		
△	.036		
⌂	4.978		
D	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

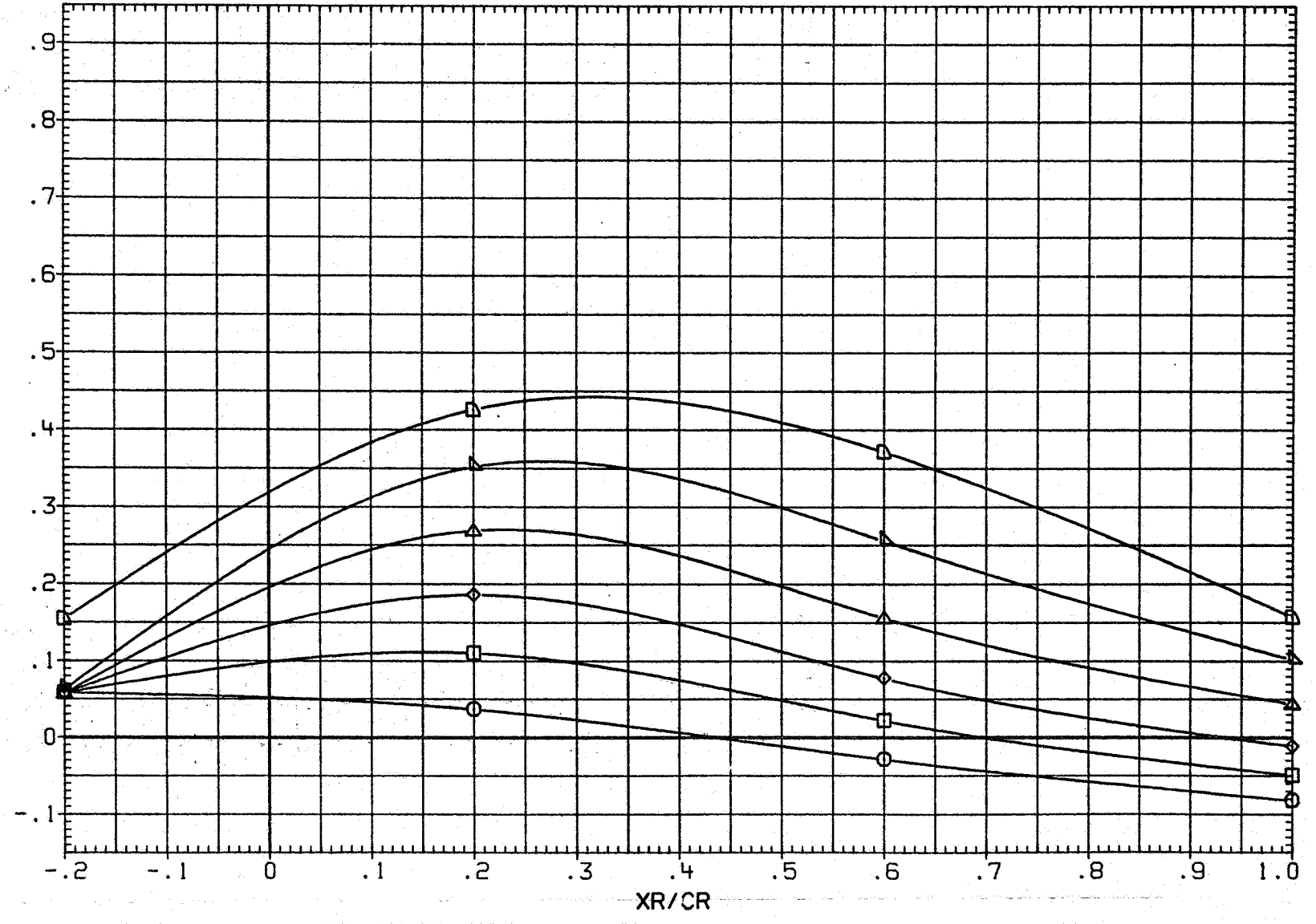

FIG 146 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW49) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.300	3.000
□	-9.485		
◇	-4.946		
△	.036		
◁	4.978		
▱	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

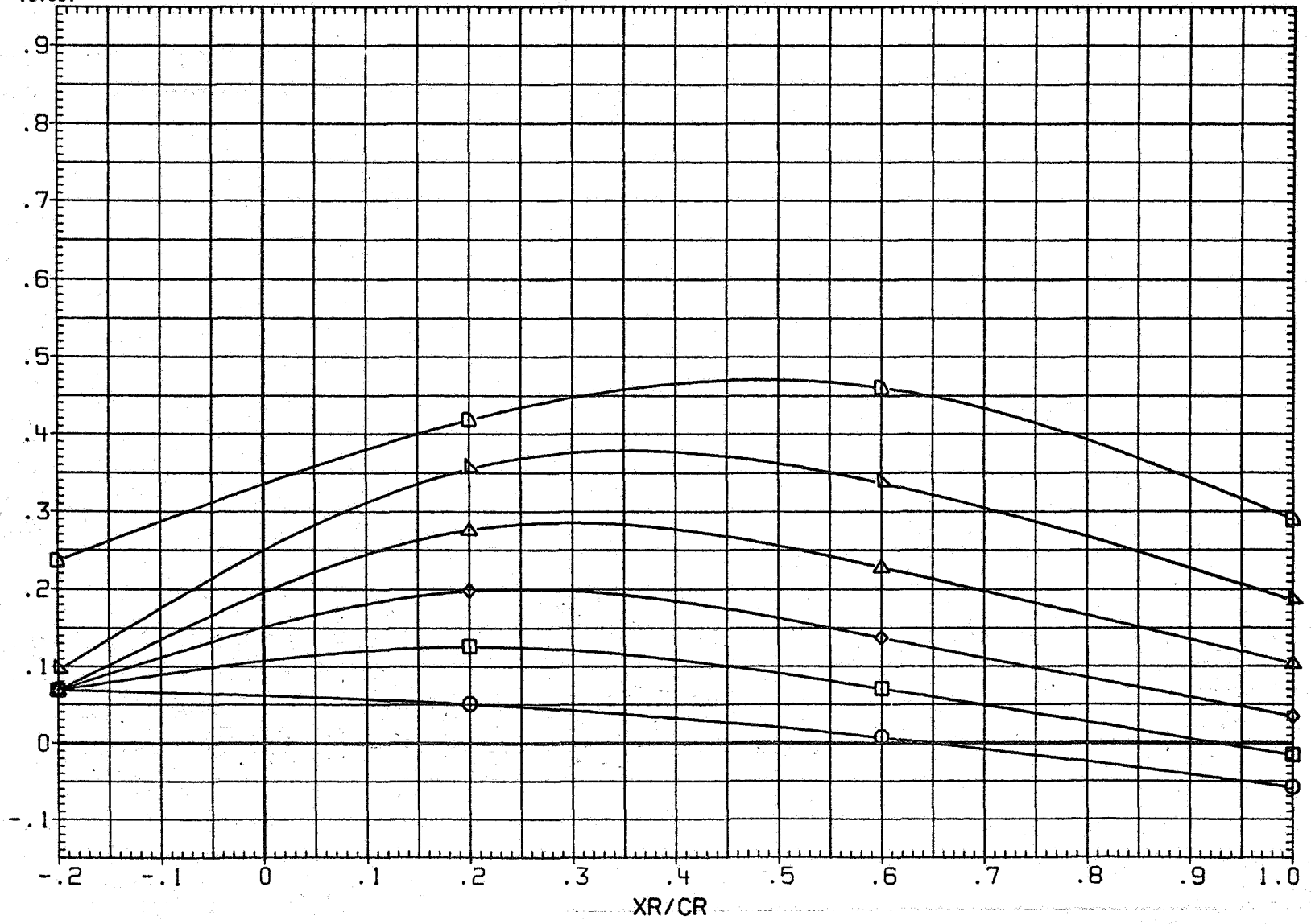

FIG 146 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW49) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.400	3.000
□	-9.485		
◇	-4.946		
△	.036		
◁	4.978		
D	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

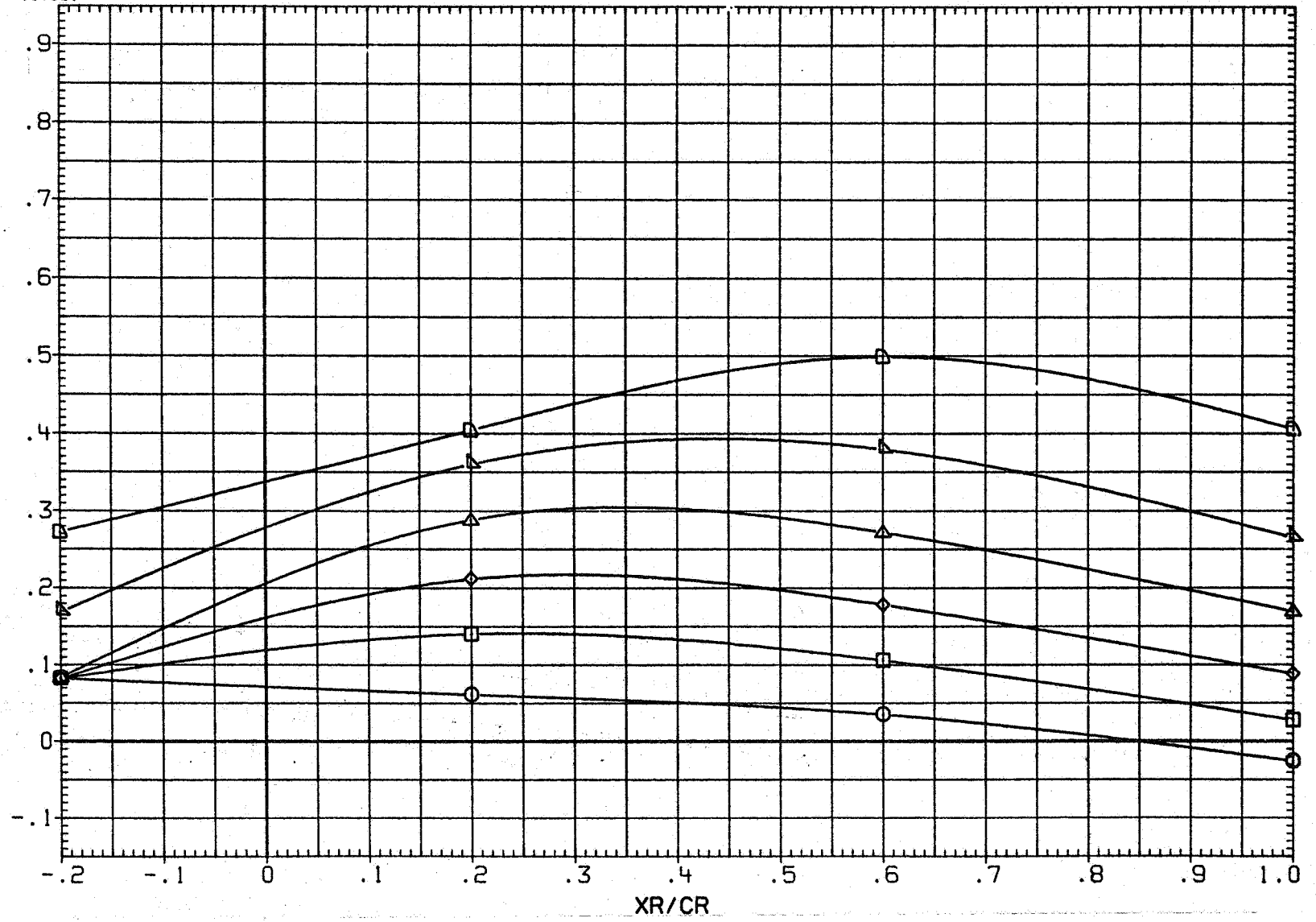

FIG 146 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW49) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.500	3.000
□	-9.485		
◇	-4.946		
△	.036		
◁	4.978		
D	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

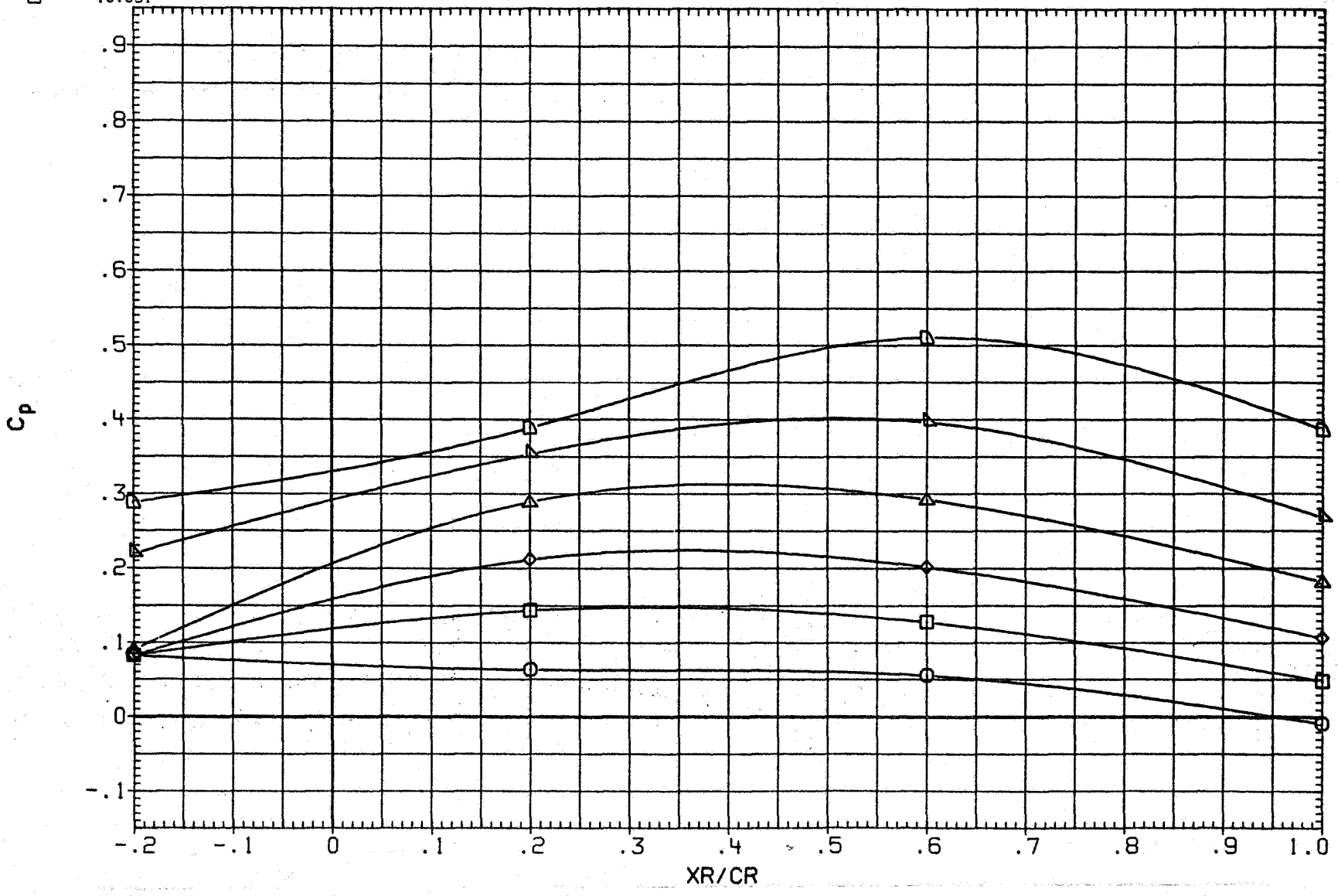

FIG 146 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW49) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.600	3.000
□	-9.485		
◇	-4.946		
△	.036		
◁	4.978		
D	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

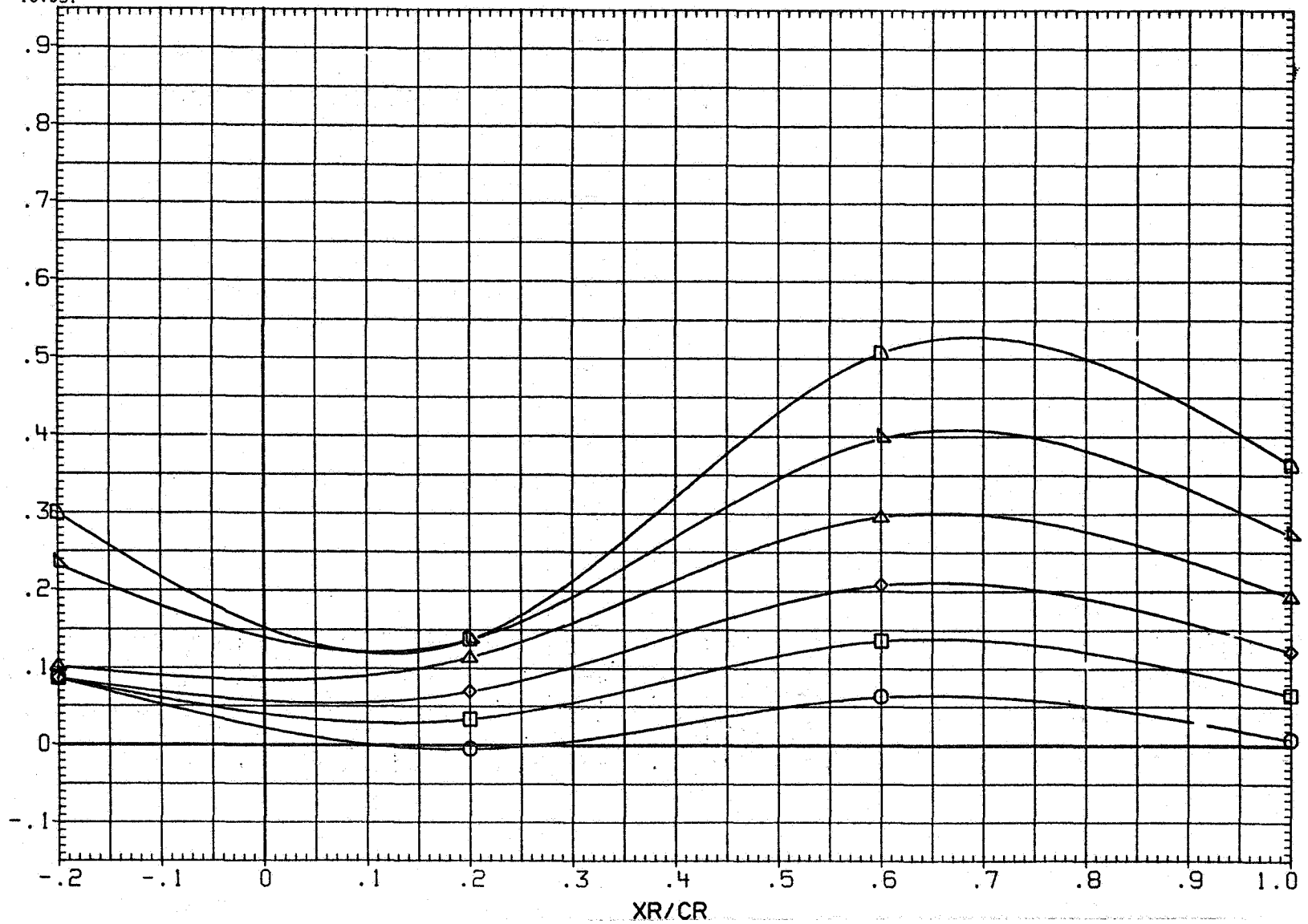

FIG 146 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW49) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.700	3.000
□	-9.485		
◇	-4.946		
△	.036		
◁	4.978		
▷	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

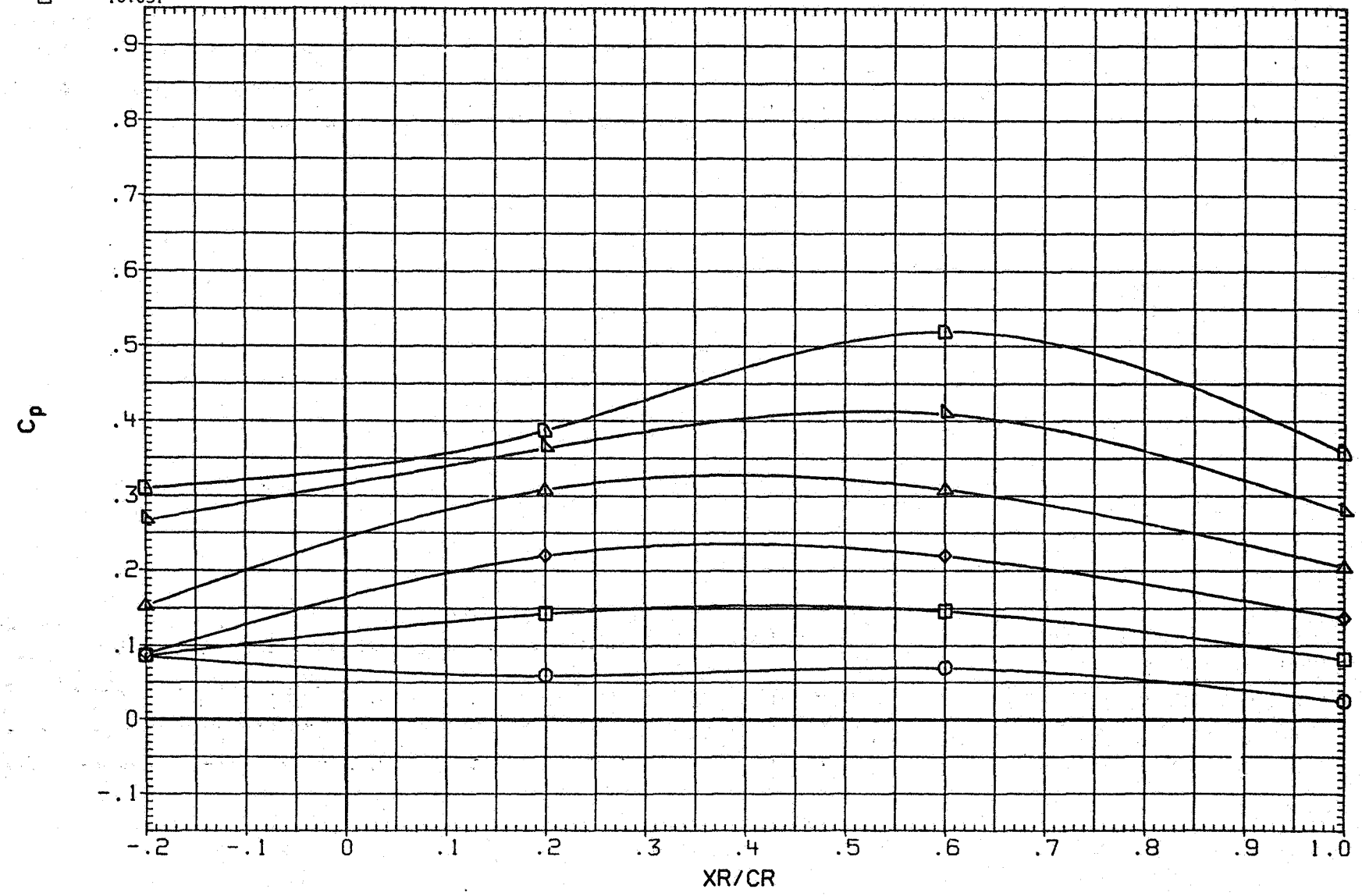

FIG 146 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW49) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.800	3.000
□	-9.485		
◇	-4.946		
△	.036		
◁	4.978		
D	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

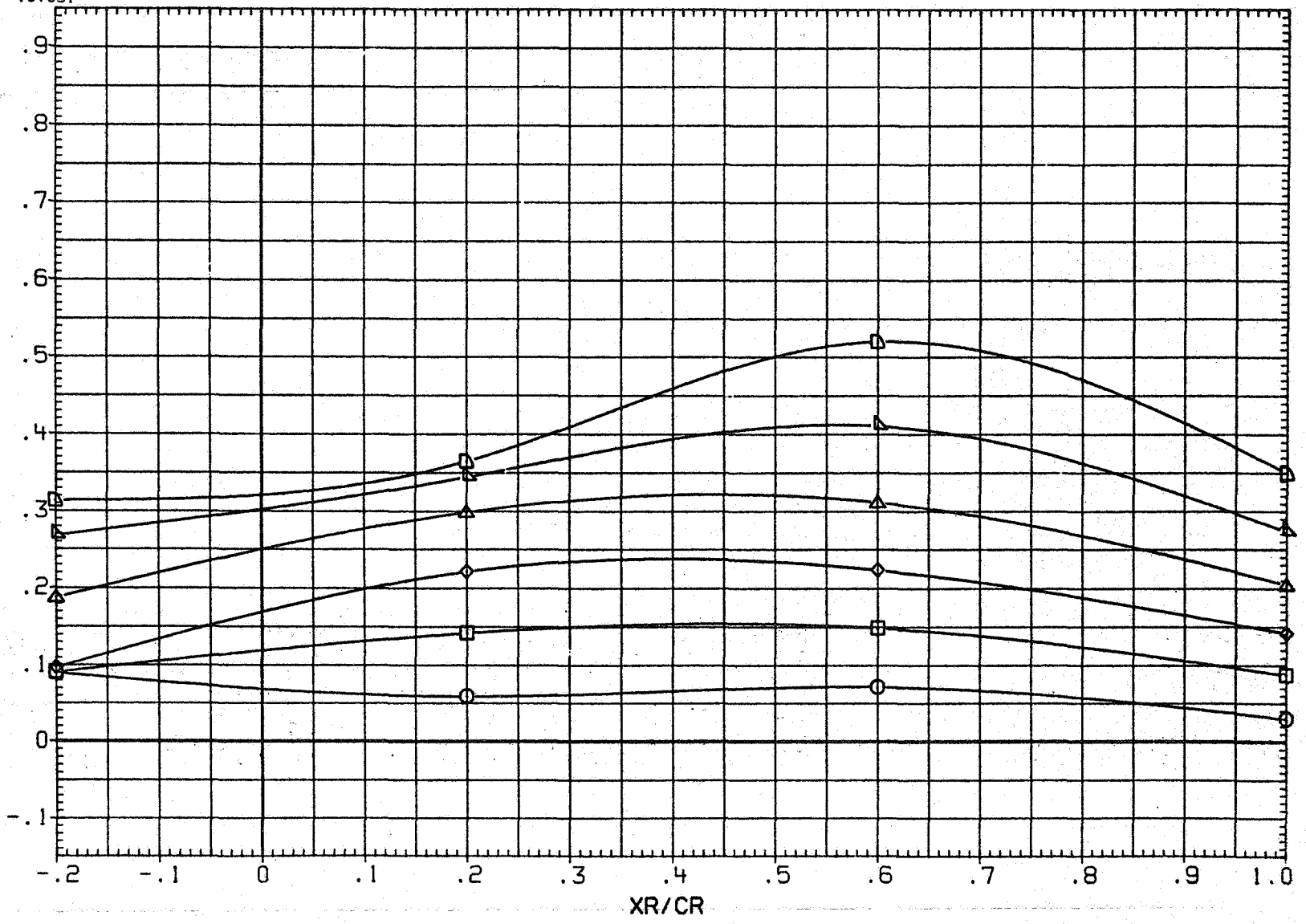

FIG 146 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW49) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.947	.900	3.000
□	-9.485		
◇	-4.946		
△	.036		
◁	4.978		
▷	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

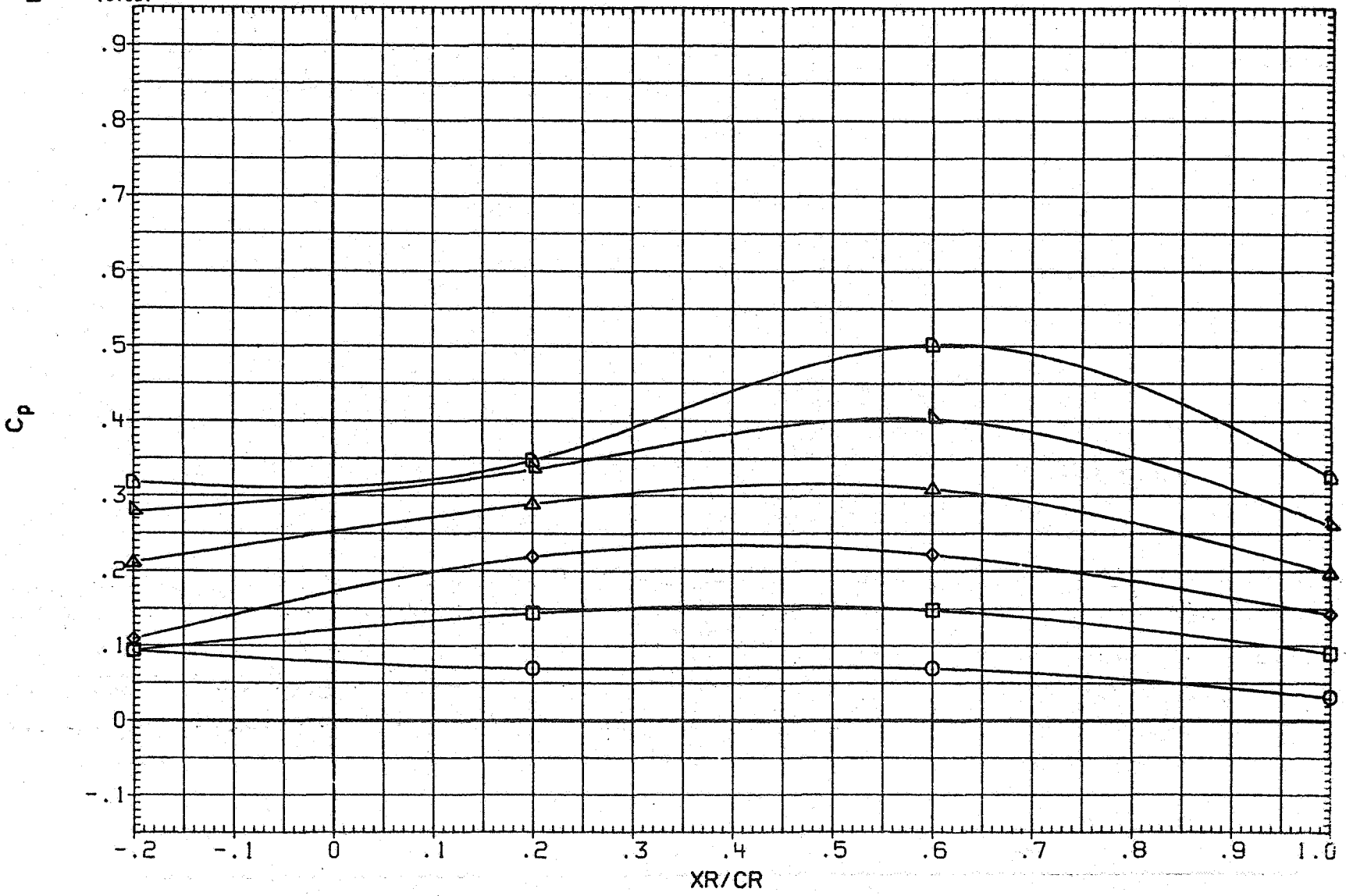

FIG 146 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW70) AMES 118-I-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.100	3.000
□	-9.494		
◇	-4.936		
△	.009		
◺	5.008		
◻	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

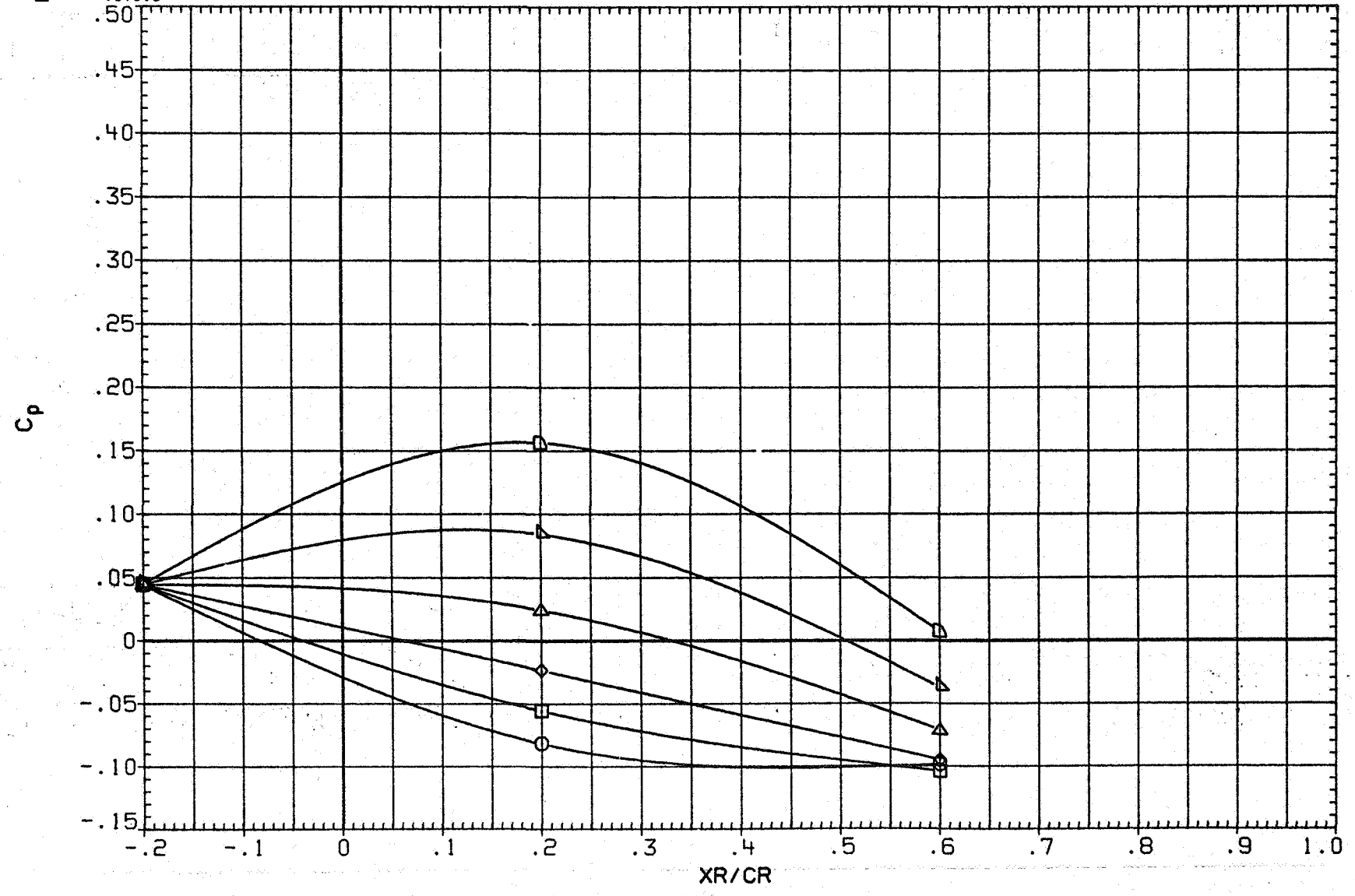

FIG 147 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HW70) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.200	3.000
□	-9.494		
◇	-4.936		
△	.009		
◁	5.008		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

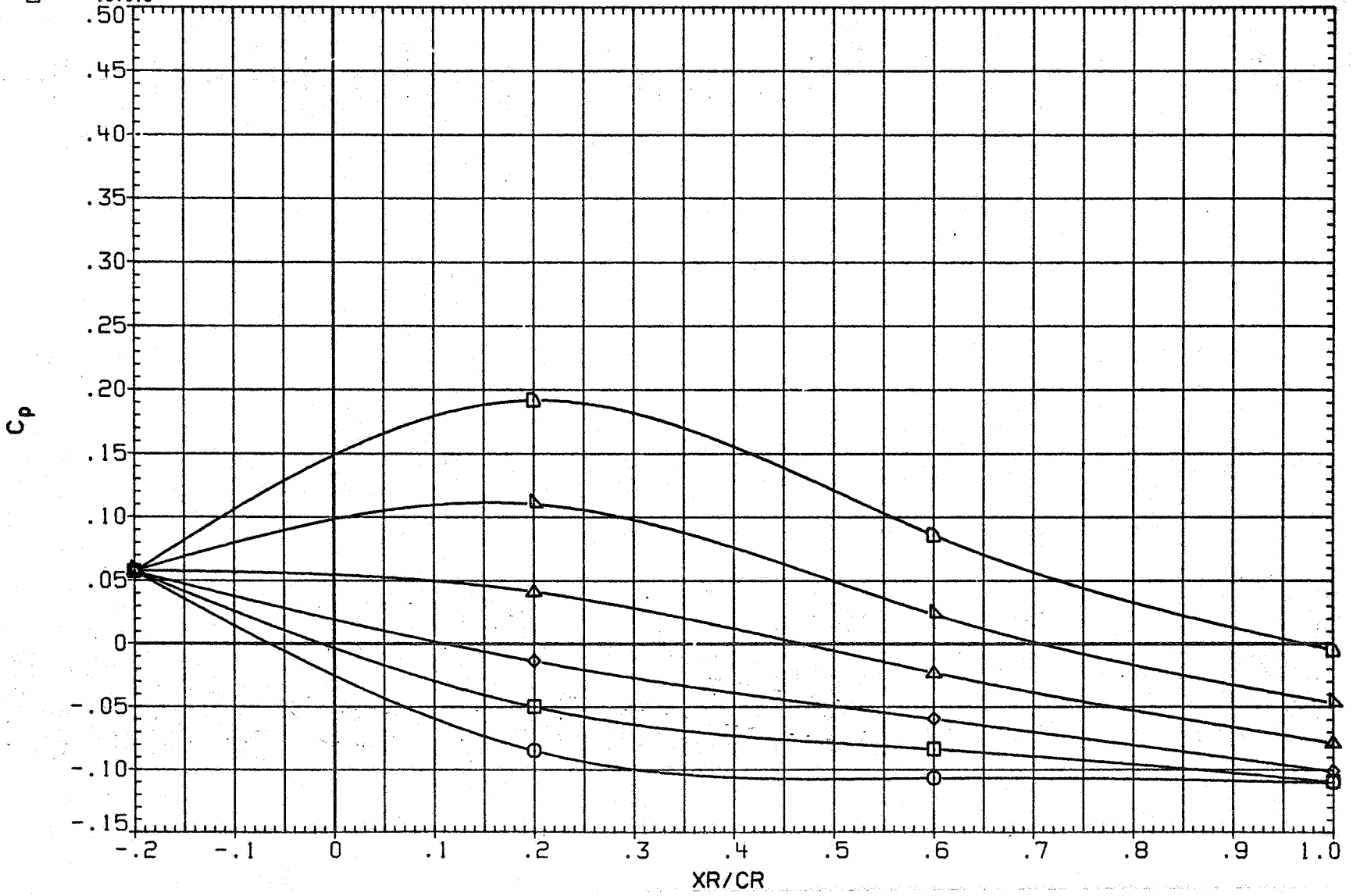

FIG 147 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HW70) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.300	3.000
□	-9.494		
◇	-4.936		
△	.009		
▽	5.008		
▷	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

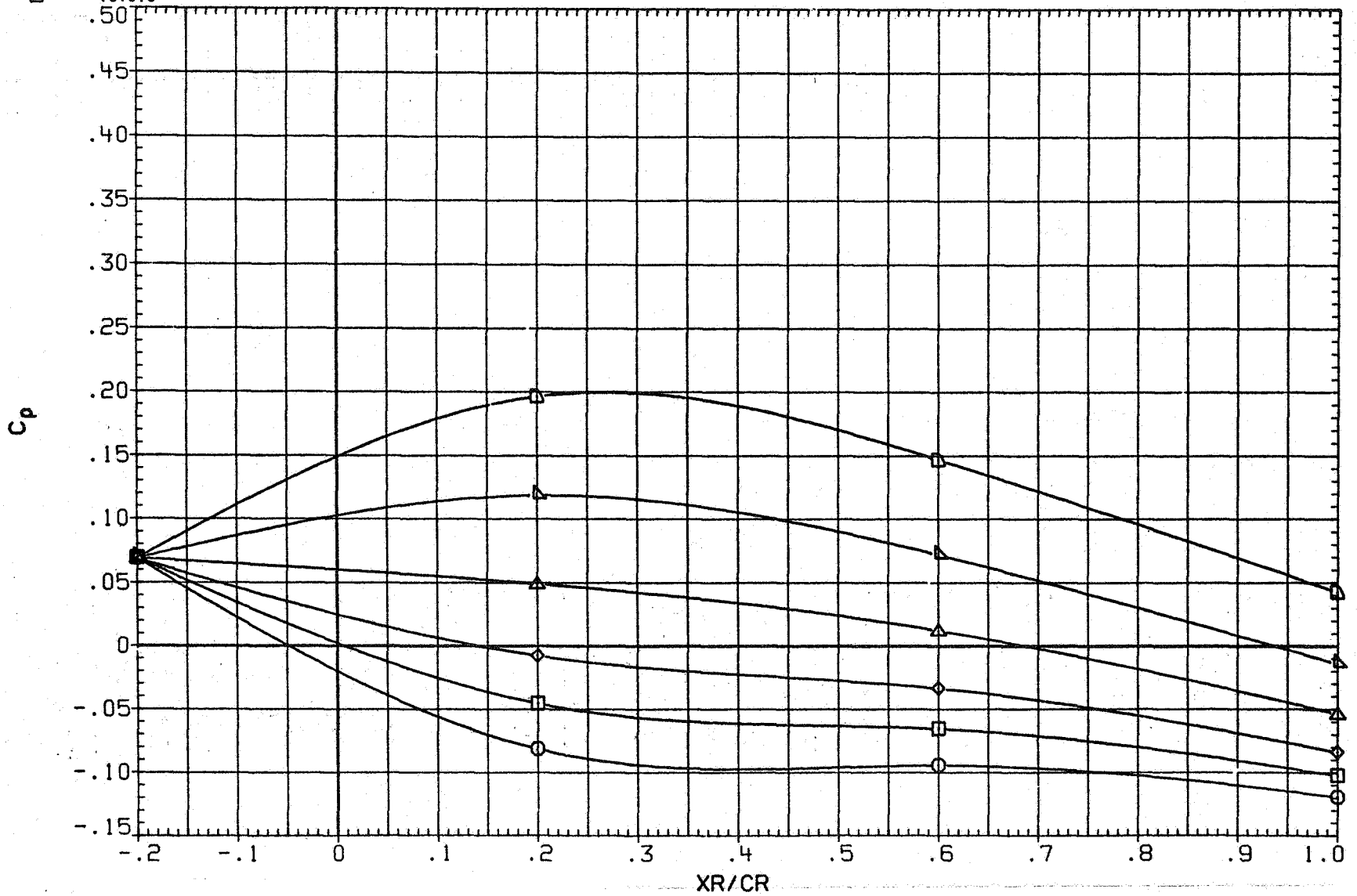

FIG 147 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

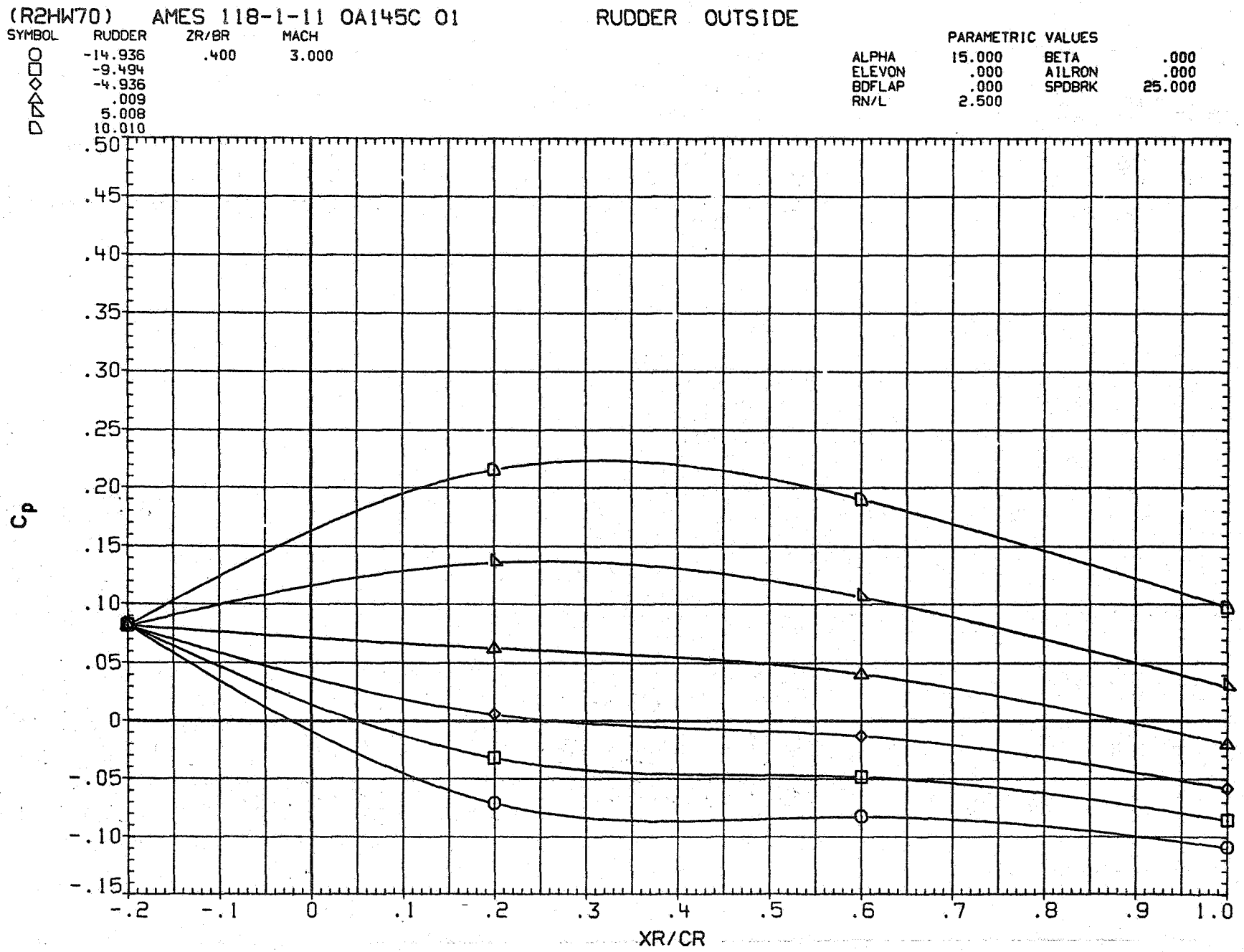

FIG 147 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HW70) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.500	3.000
□	-9.494		
◇	-4.936		
△	.009		
◁	5.008		
▷	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

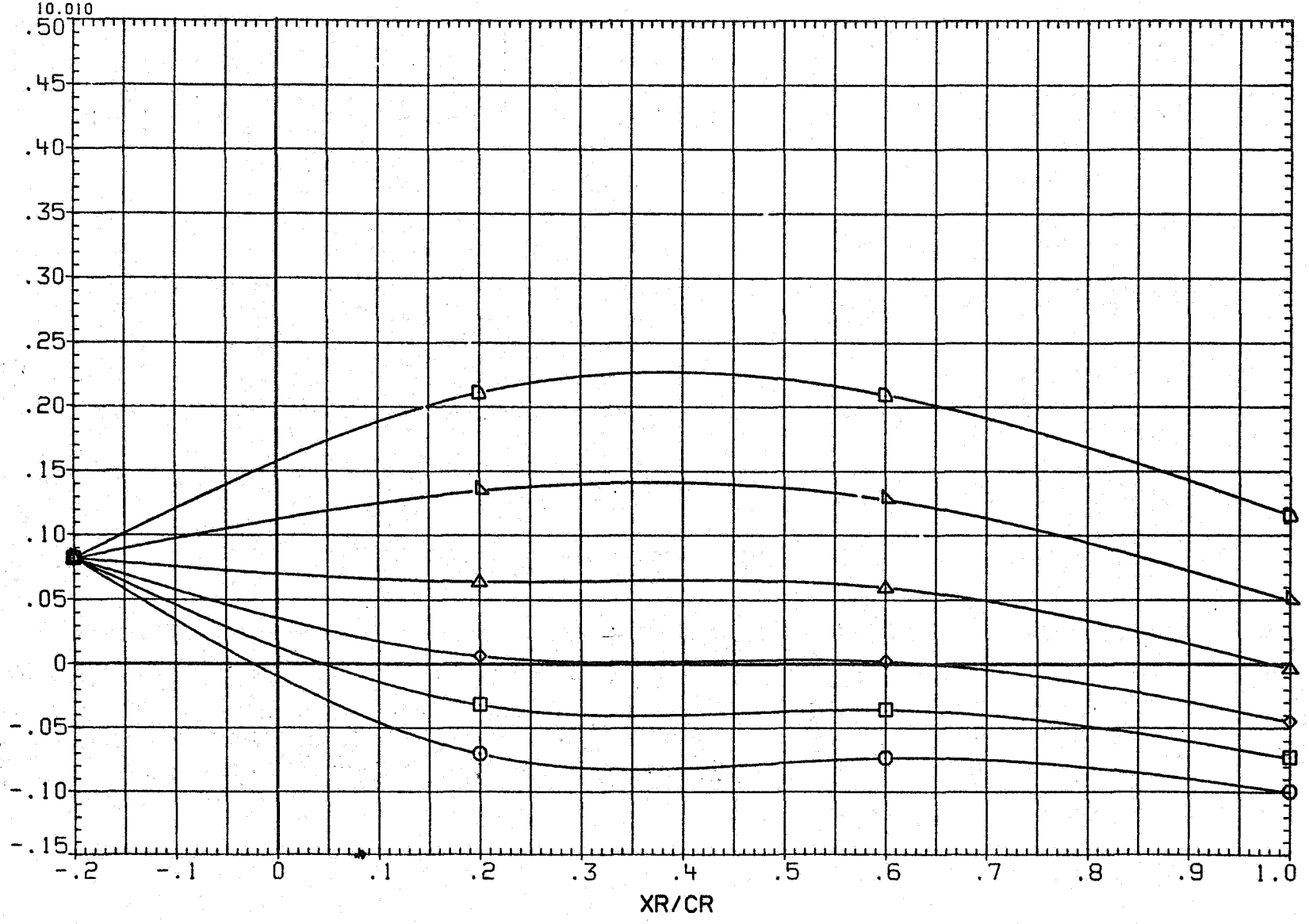

FIG 147 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HW70) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.600	3.000
□	-9.494		
◇	-4.936		
△	.009		
△	5.008		
□	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

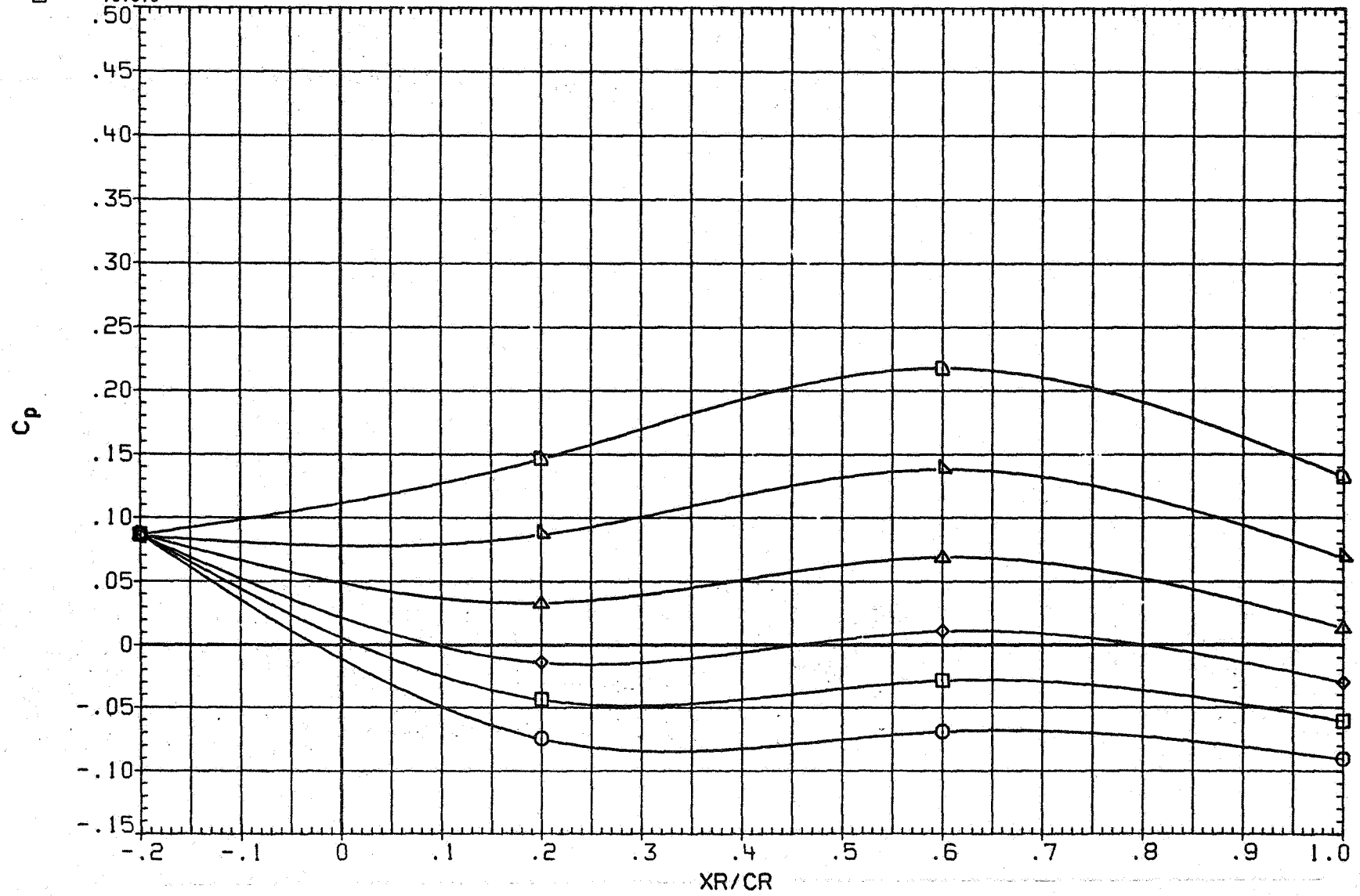

FIG 147 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HW70) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.700	3.000
□	-9.494		
◇	-4.936		
△	.009		
▷	5.008		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

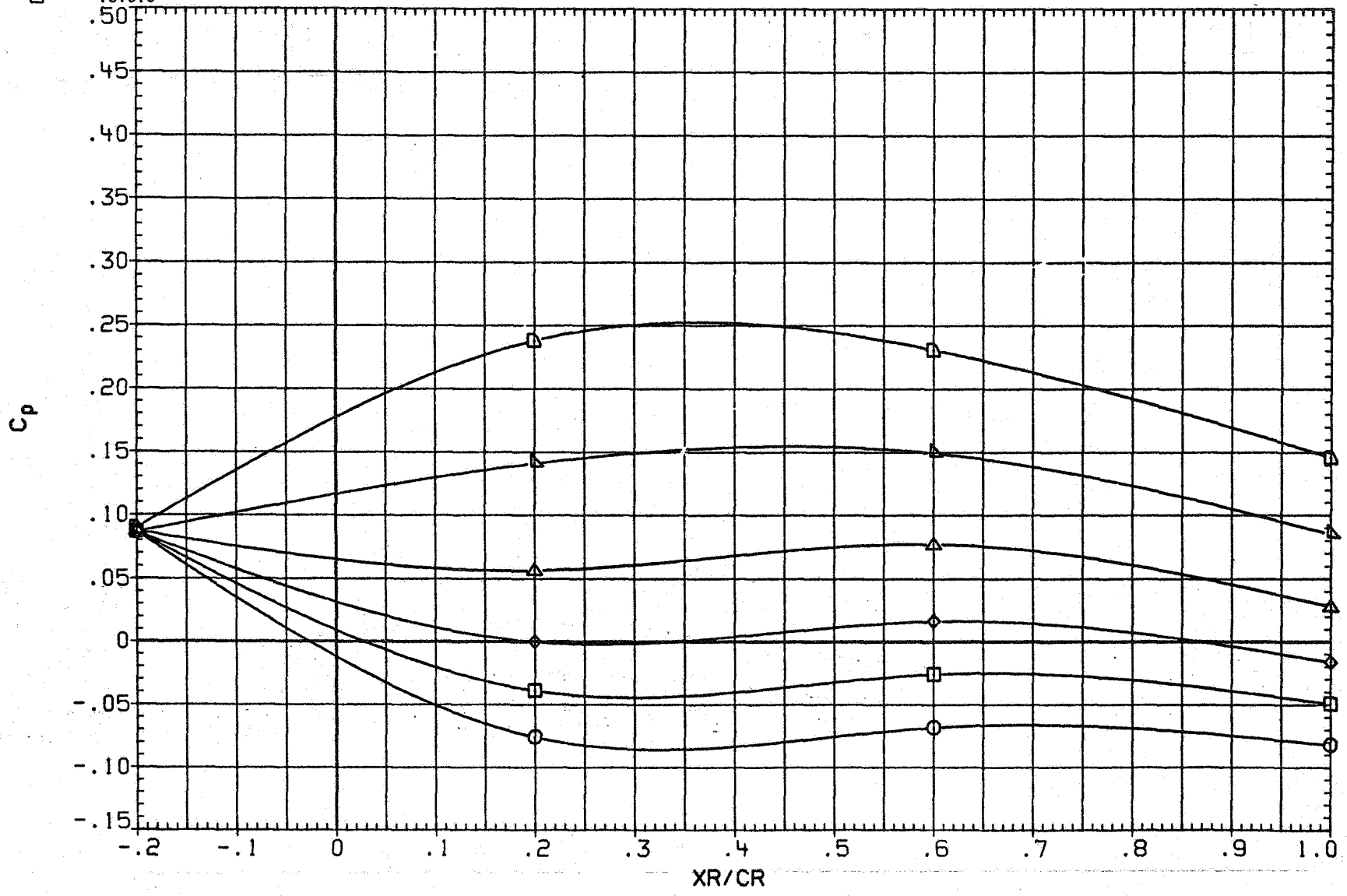

FIG 147 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HW70) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.800	3.000
□	-9.494		
◇	-4.936		
△	.009		
◁	5.008		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

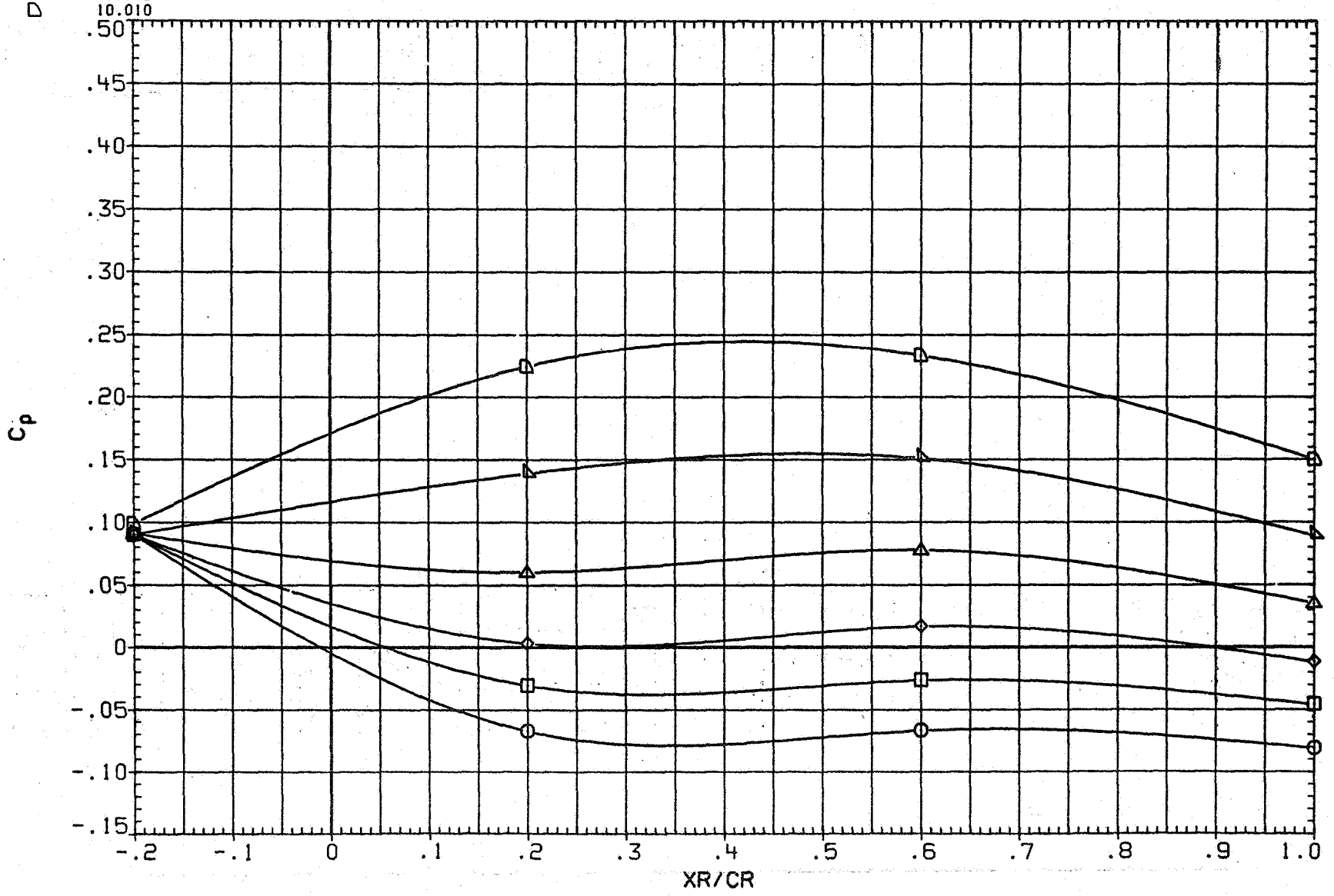

FIG 147 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HW70) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.936	.900	3.000
□	-9.494		
◇	-4.936		
△	.009		
▽	5.008		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

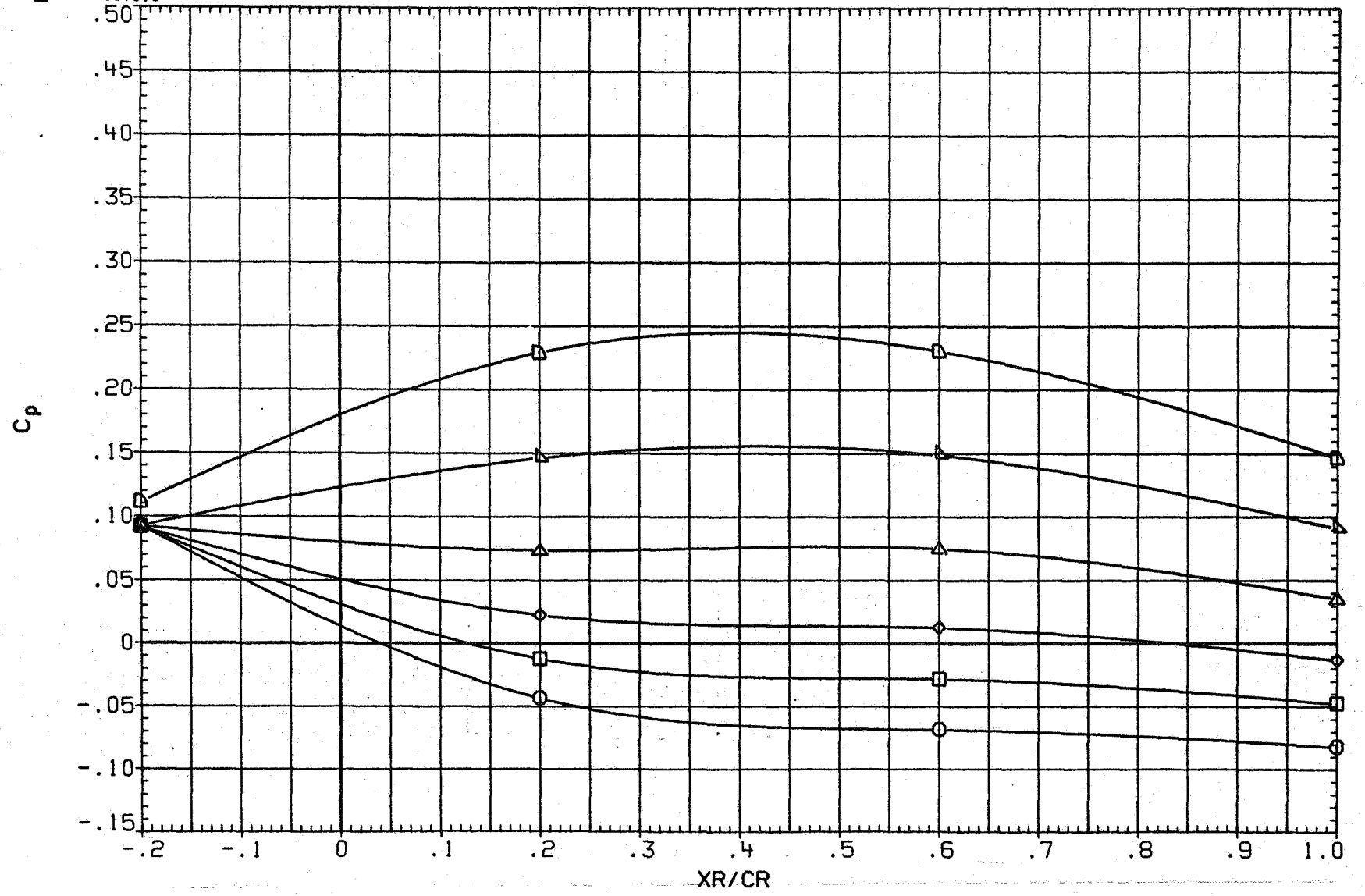

FIG 147 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.100	3.000
□	-9.485		
◇	-4.946		
△	.018		
◁	4.998		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

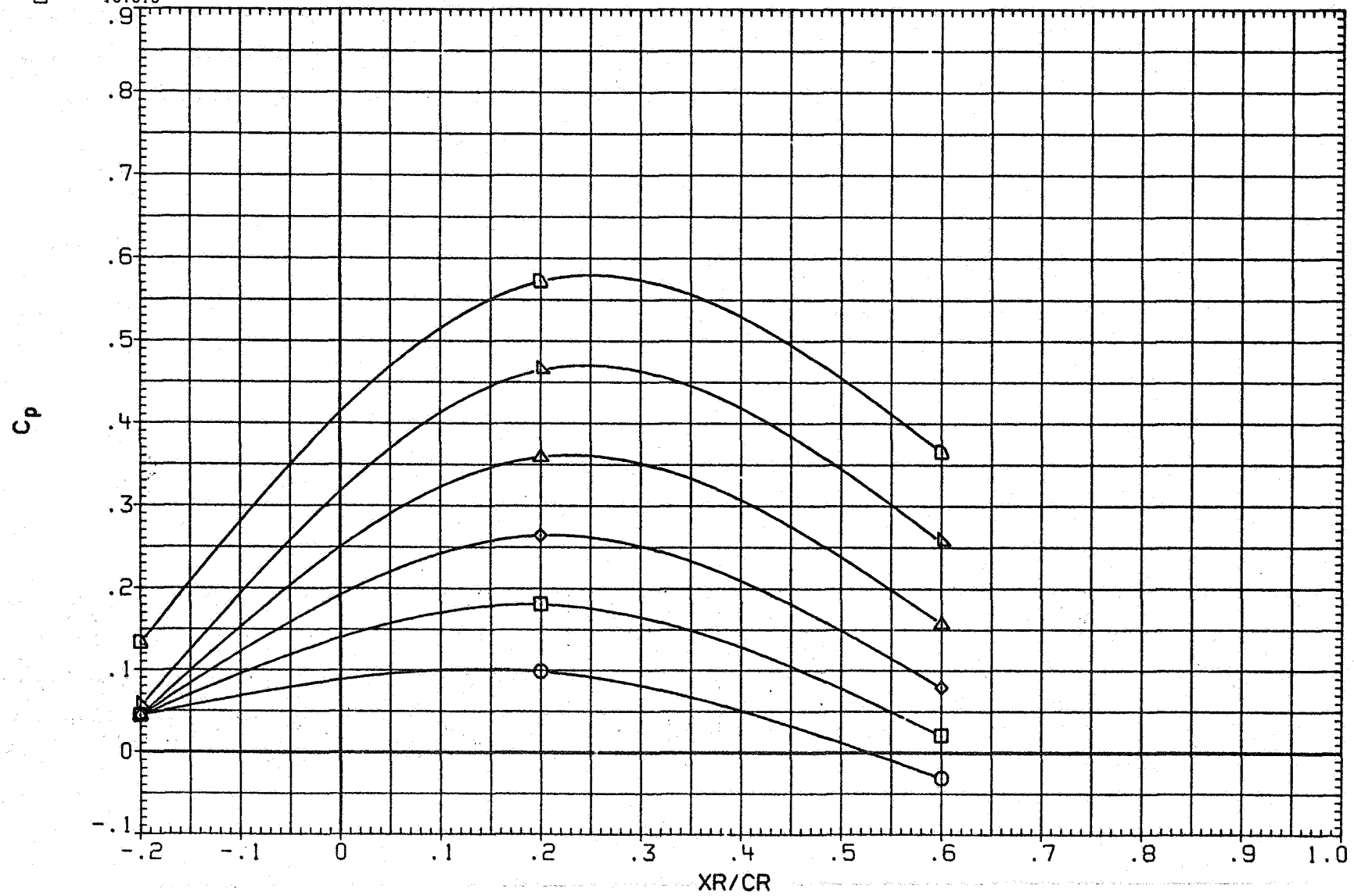

FIG 148 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.200	3.000
□	-9.485		
◇	-4.946		
△	.018		
▷	4.998		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

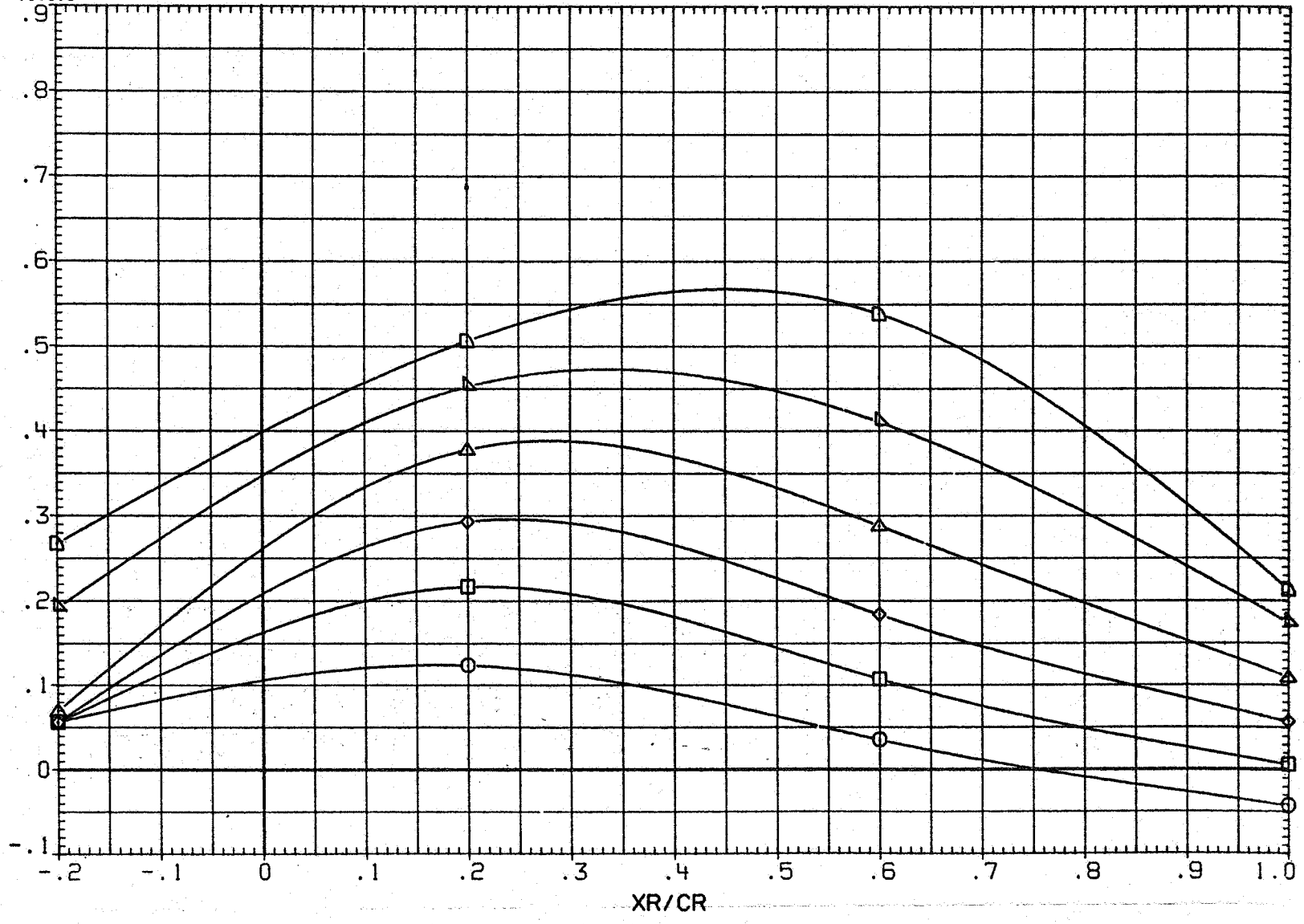

FIG 148 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.300	3.000
□	-9.485		
◇	-4.946		
◁	.018		
△	4.998		
▱	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

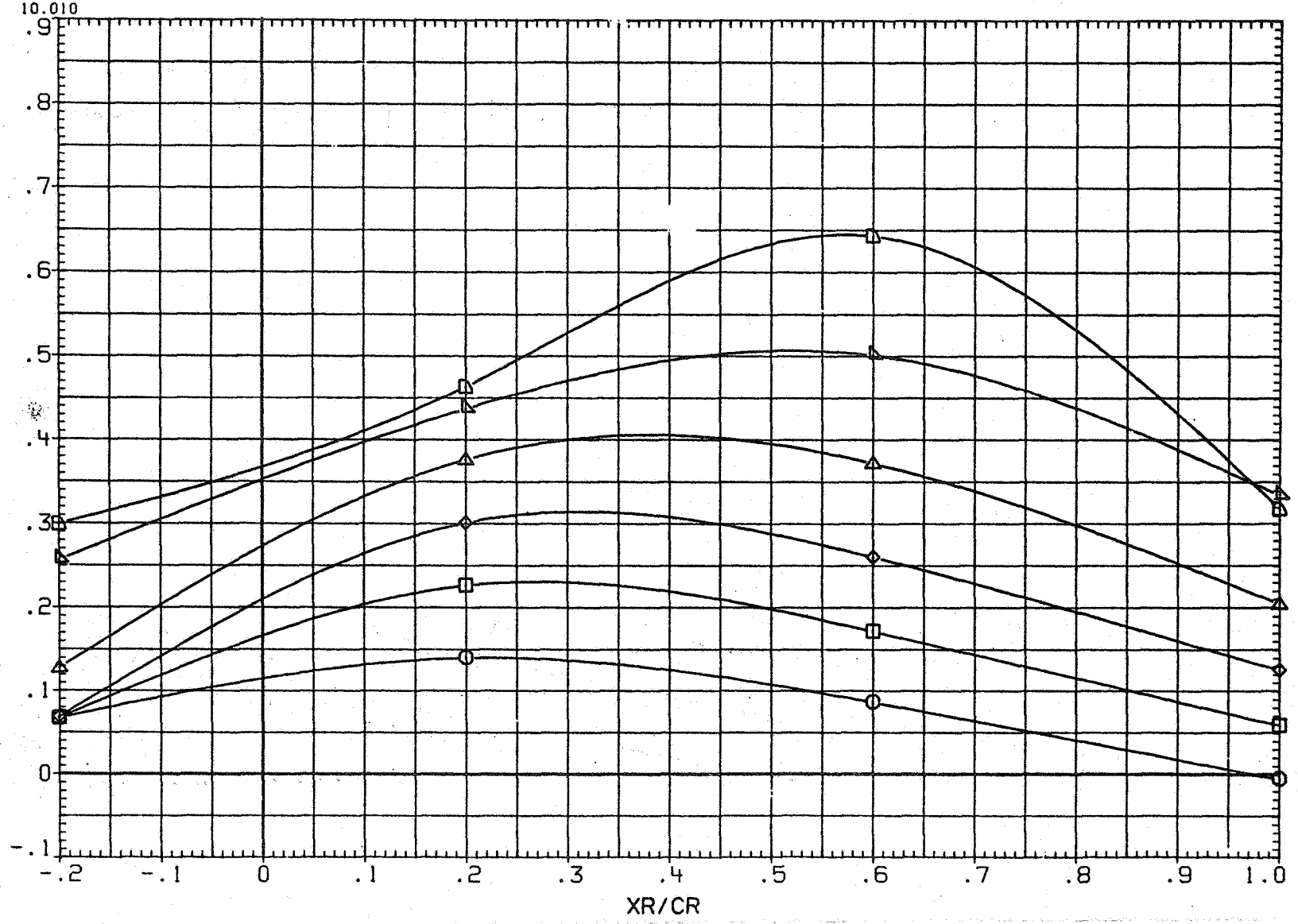

FIG 148 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.400	3.000
□	-9.485		
◇	-4.946		
△	.018		
◪	4.998		
▱	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

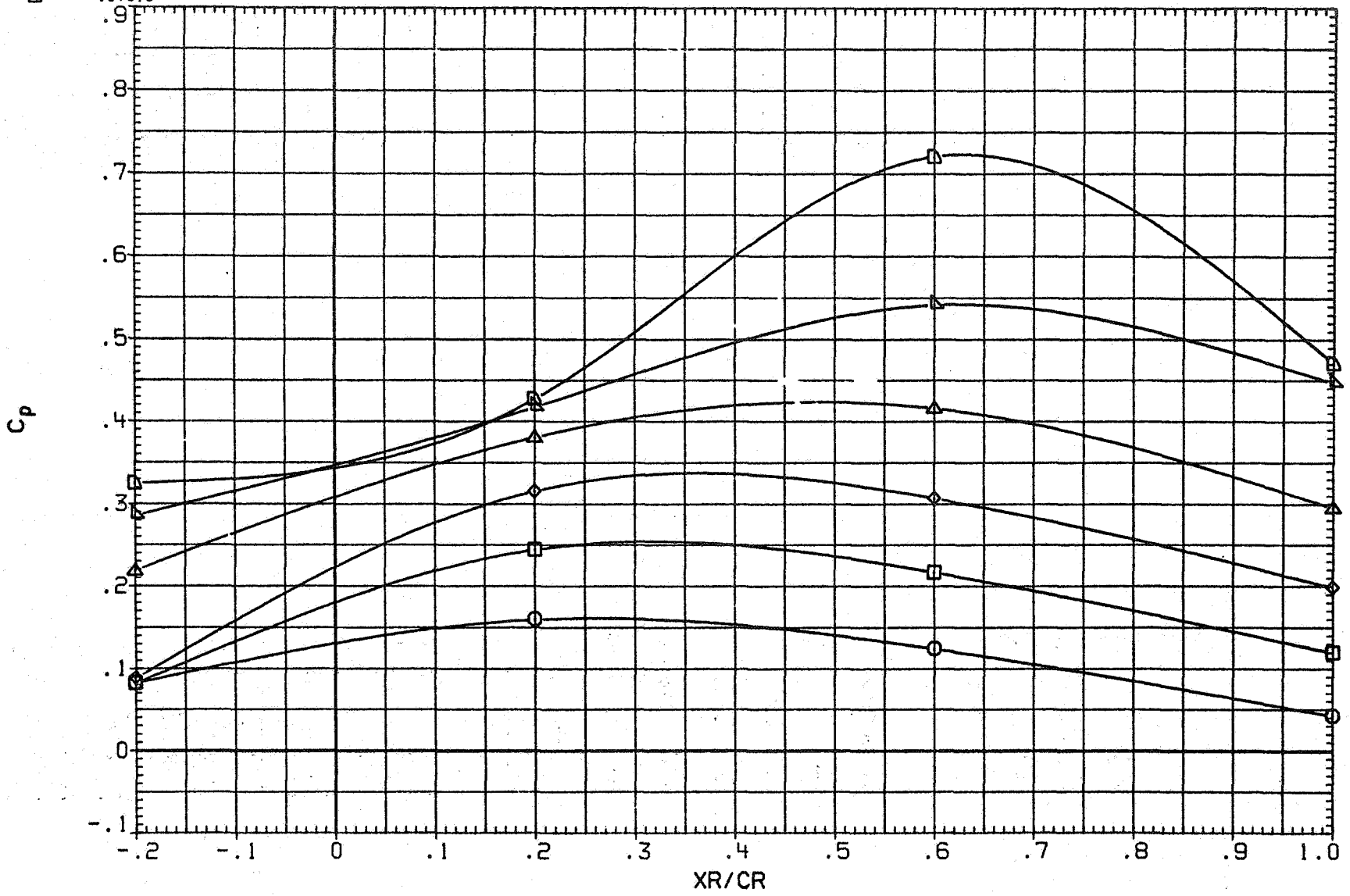

FIG 148 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.500	3.000
□	-9.485		
◇	-4.946		
△	.018		
◁	4.998		
▷	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

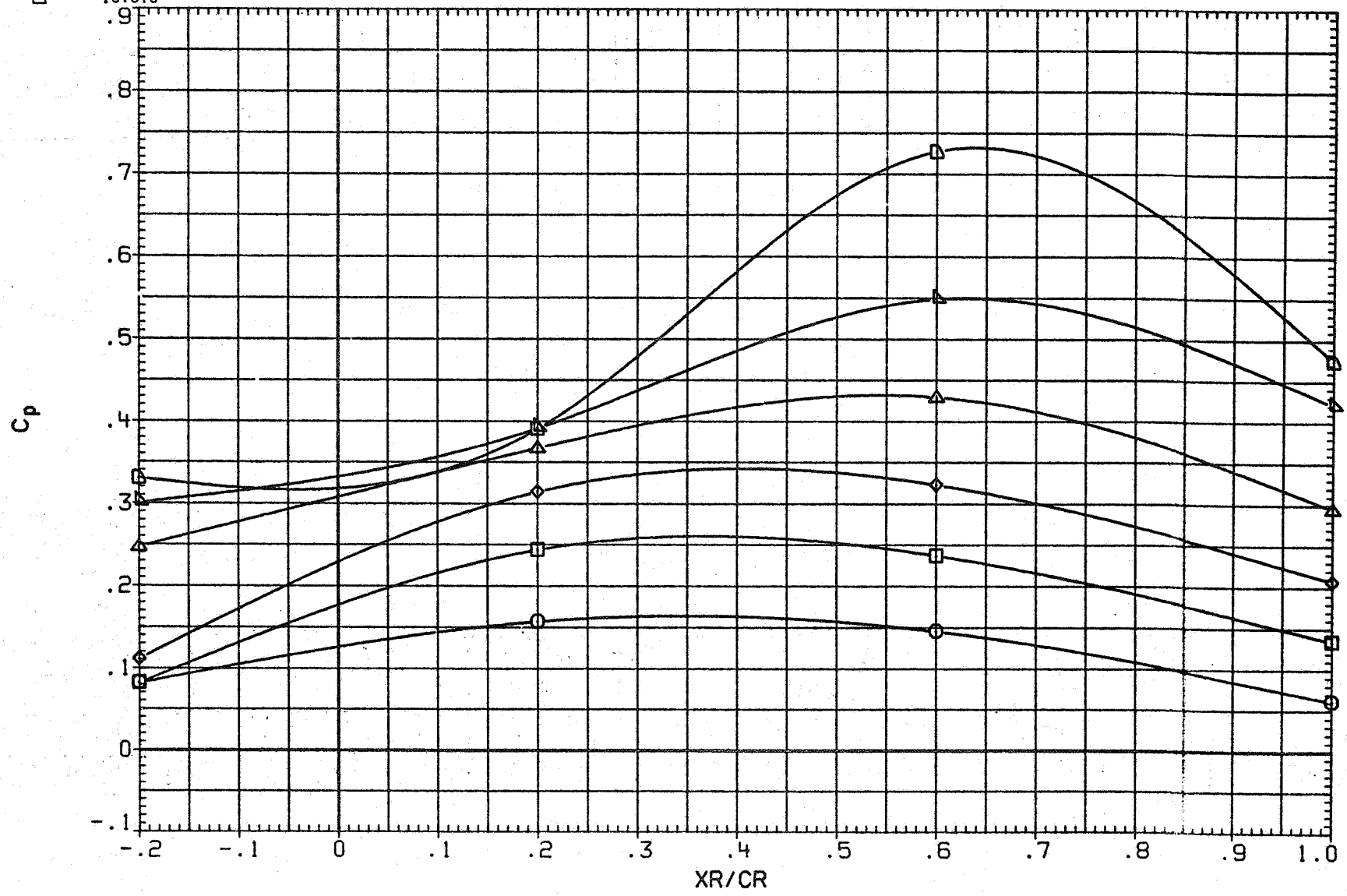

FIG 148 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.600	3.000
□	-9.485		
◇	-4.946		
△	.018		
⊿	4.998		
▱	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

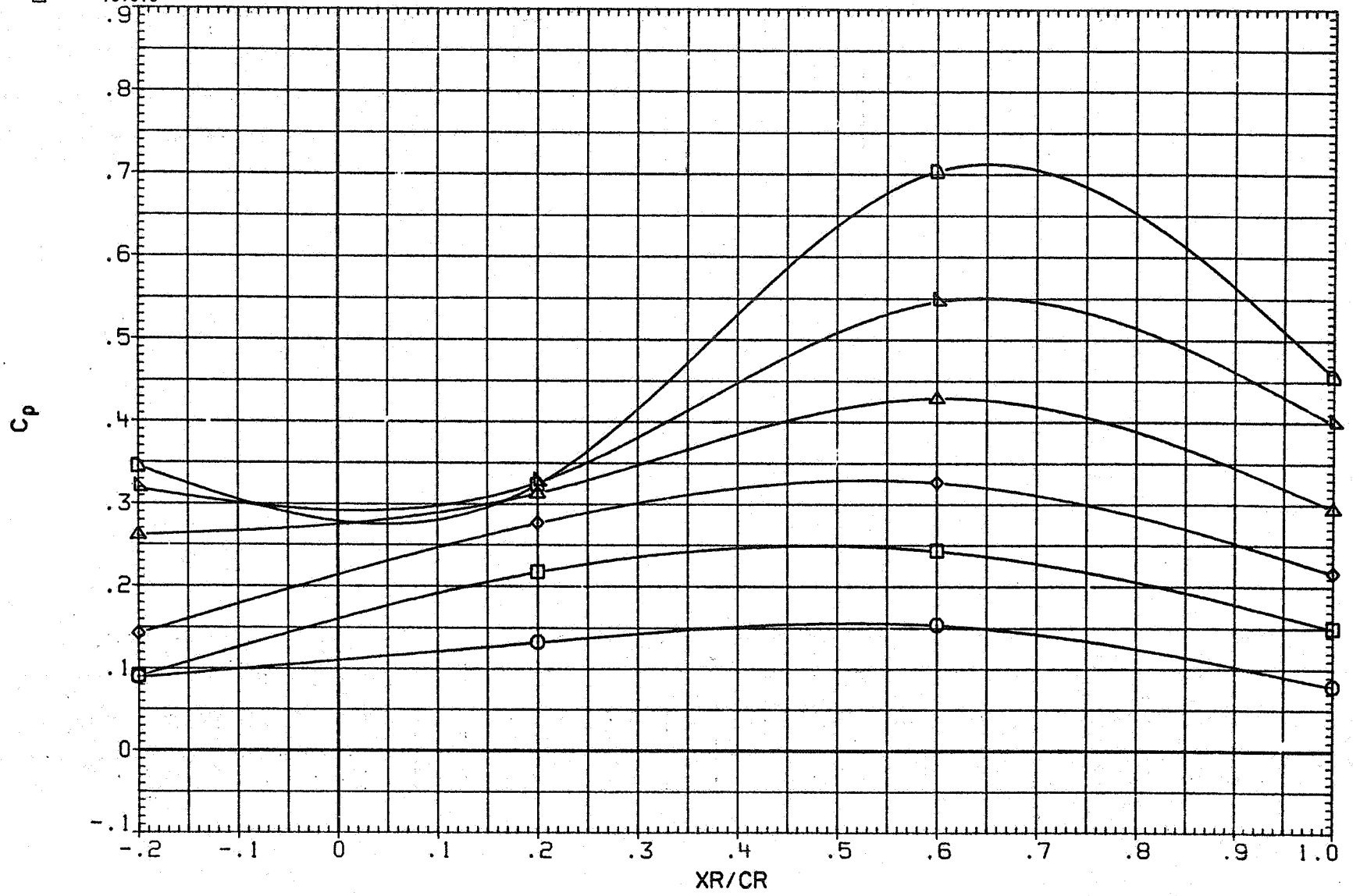

FIG 148 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.700	3.000
□	-9.485		
◇	-4.946		
△	.018		
◸	4.998		
▱	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

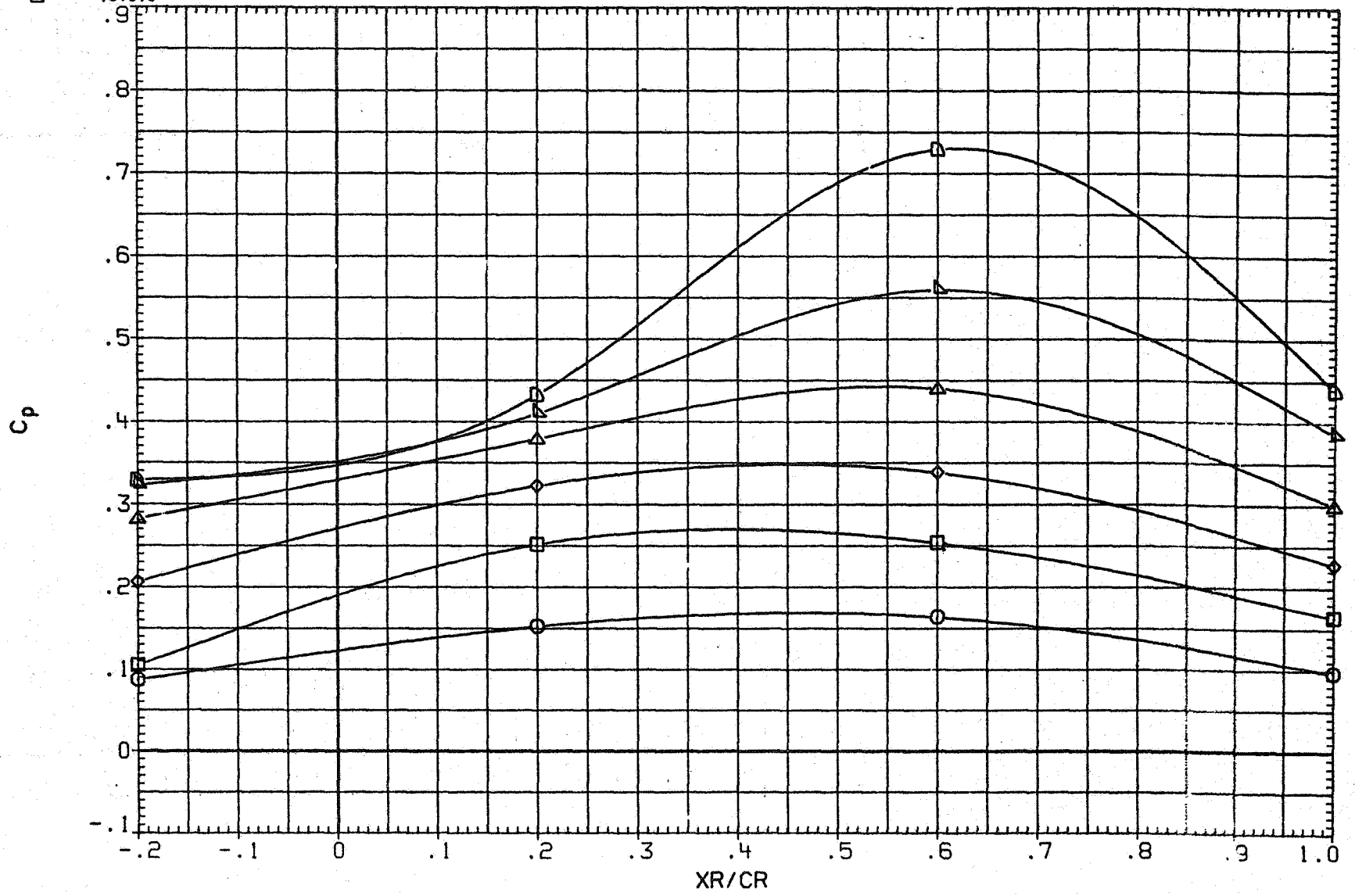

FIG 148 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.800	3.000
□	-9.485		
◇	-4.946		
△	.018		
◁	4.998		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

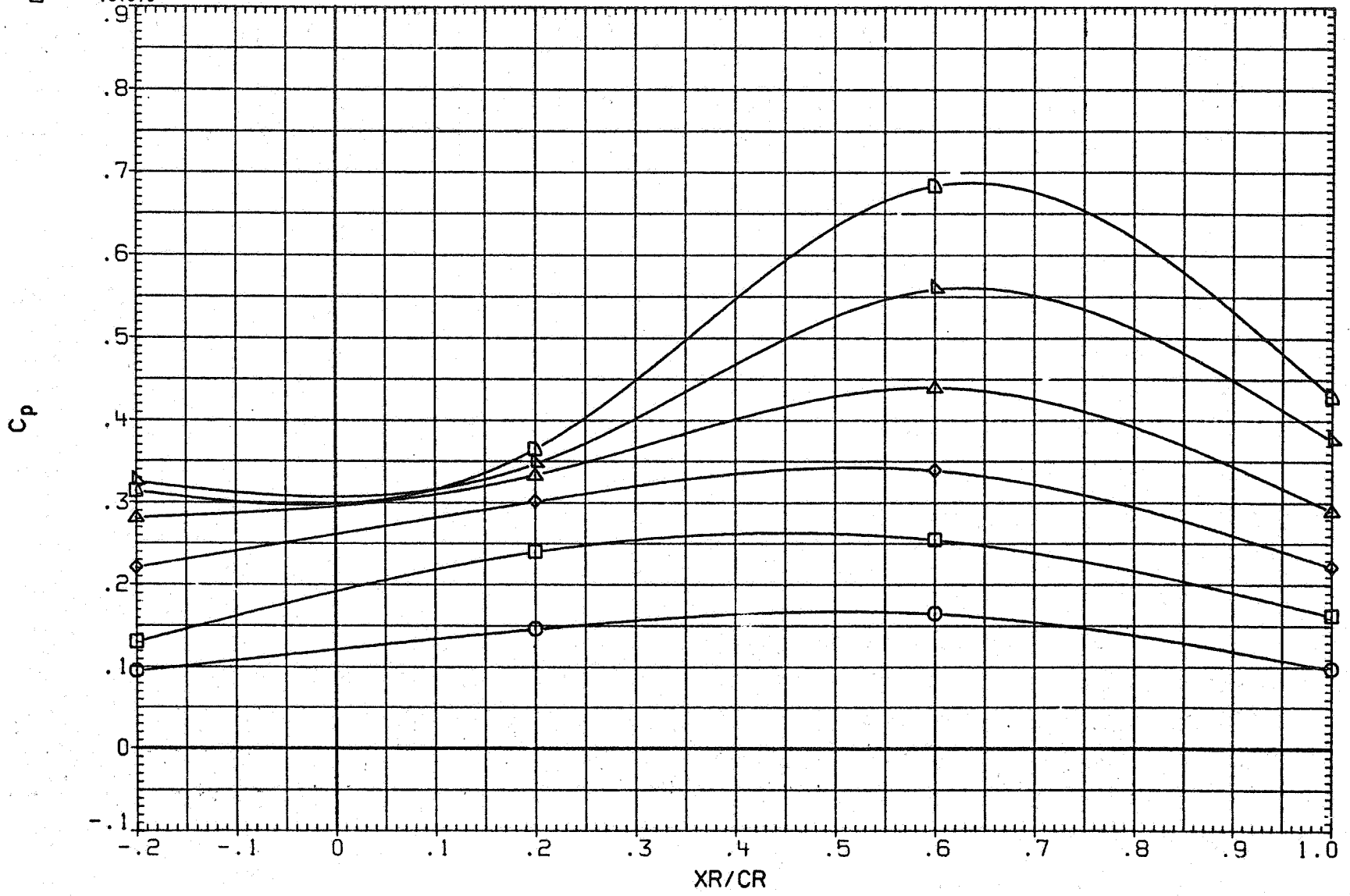

FIG 148 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.990	.900	3.000
□	-9.485		
◇	-4.946		
△	.018		
◁	4.998		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

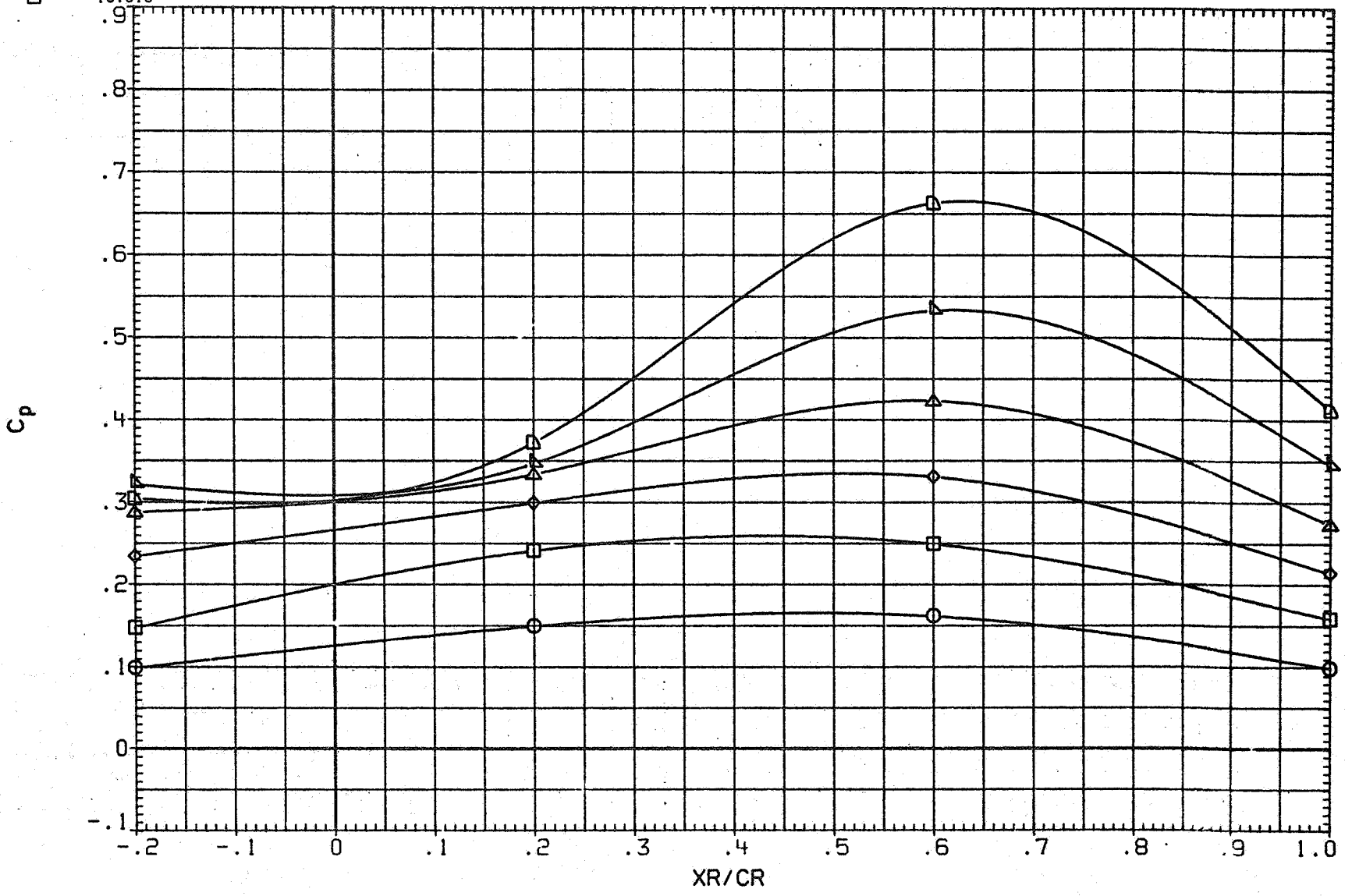

FIG 148 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HWA0) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.968	.100	3.000
□	-9.494		
◇	-4.926		
△	.018		
◁	5.028		
D	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

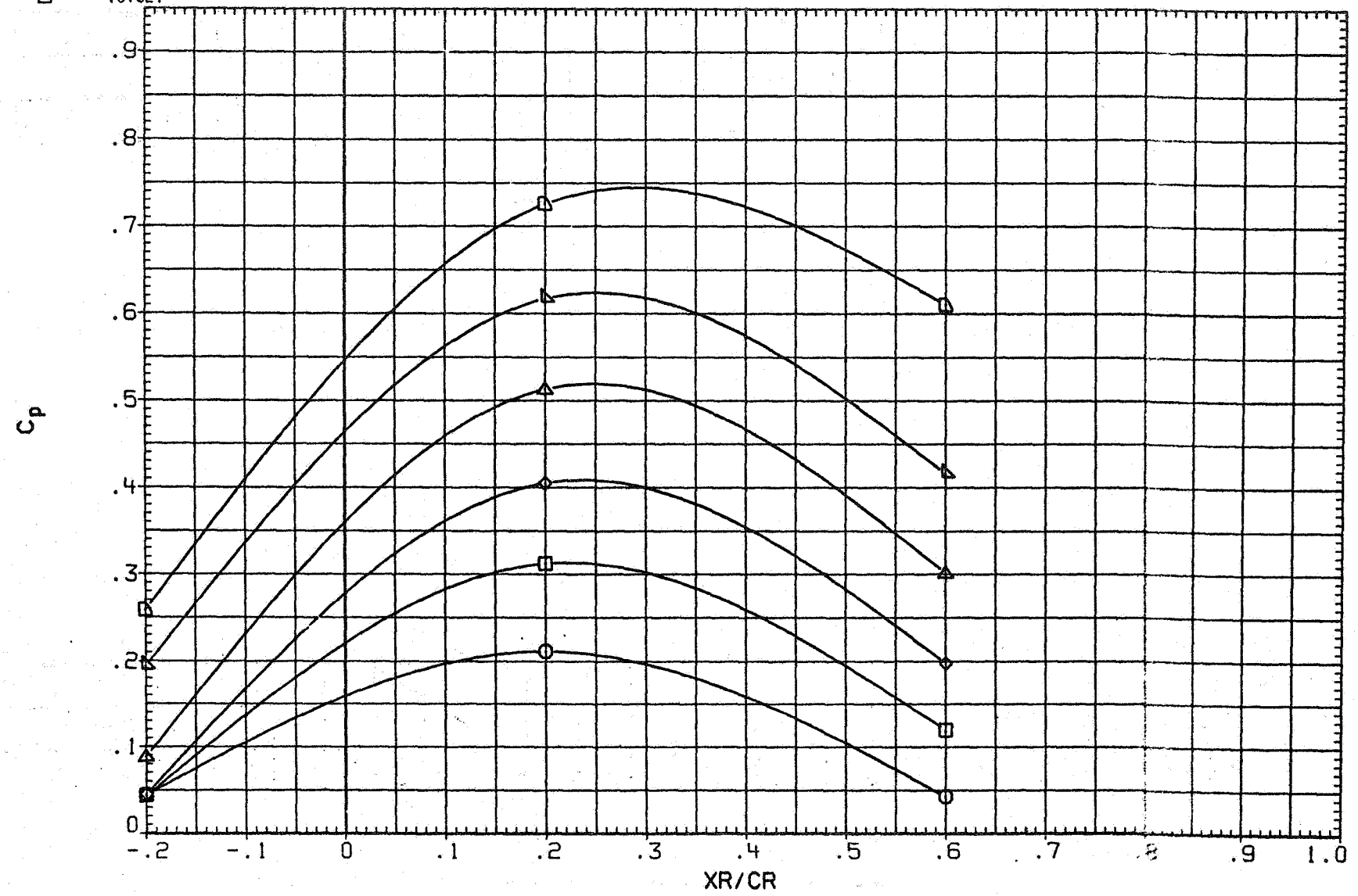

FIG 149 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

(R2HWA0) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.968	.200	3.000
□	-9.494		
◇	-4.926		
△	.018		
◺	5.029		
D	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

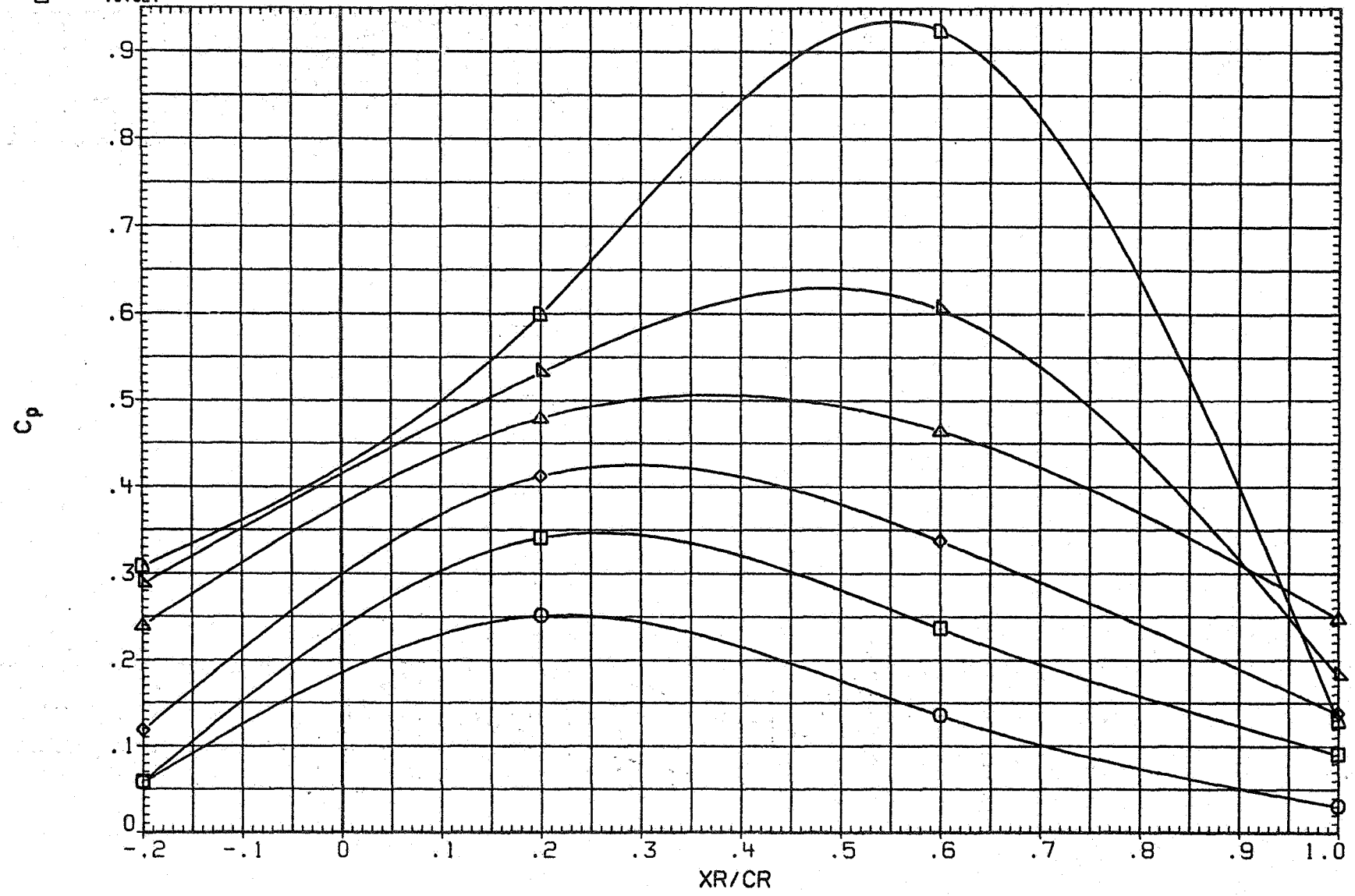

FIG 149 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

(R2HWA0) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.968	.300	3.000
□	-9.494		
◇	-4.926		
◁	.018		
△	5.028		
□	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

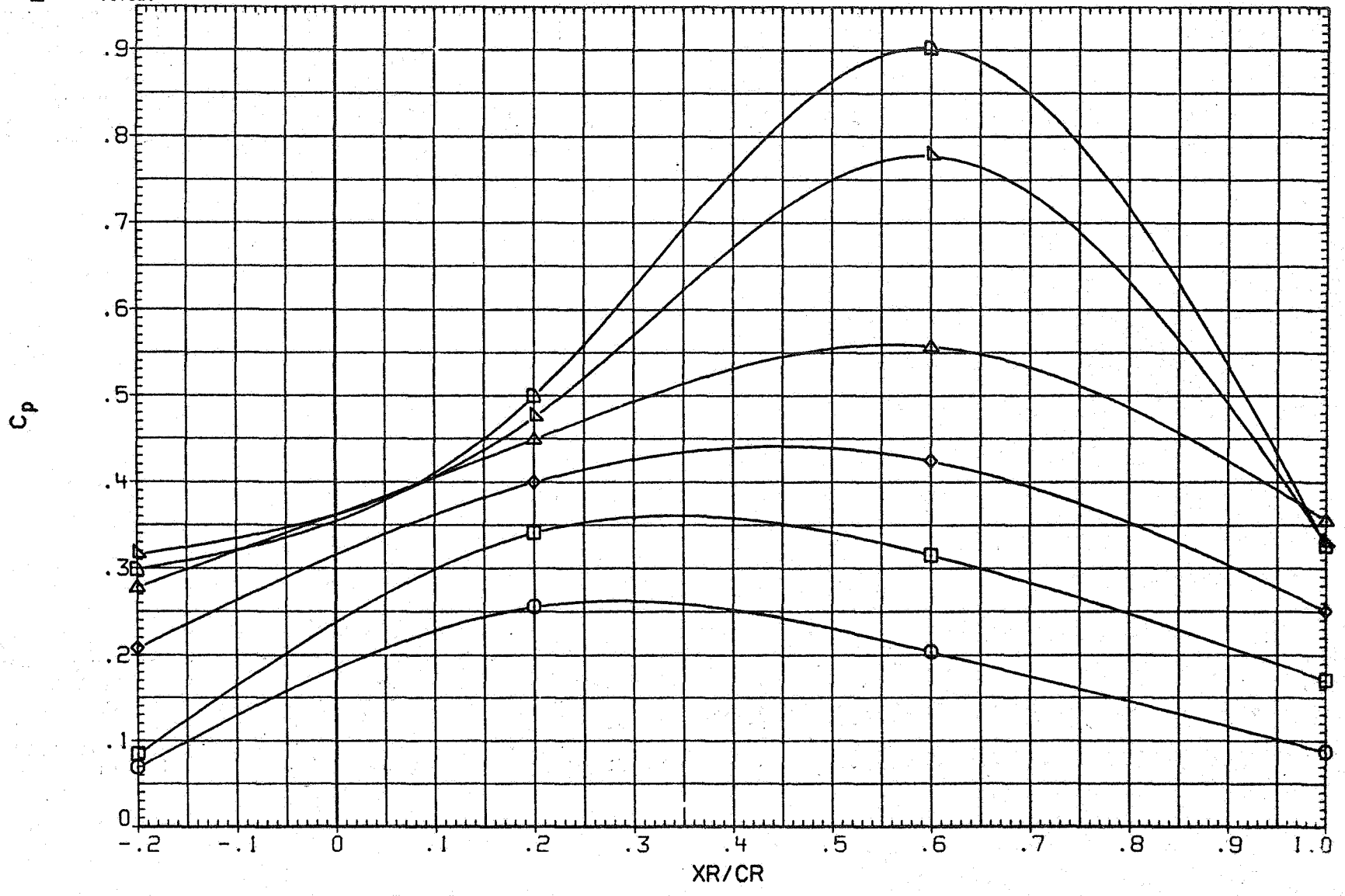

FIG 149 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

(R2HWA0) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.968	.400	3.000
□	-9.494		
◇	-4.926		
◁	.018		
△	5.028		
▷	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

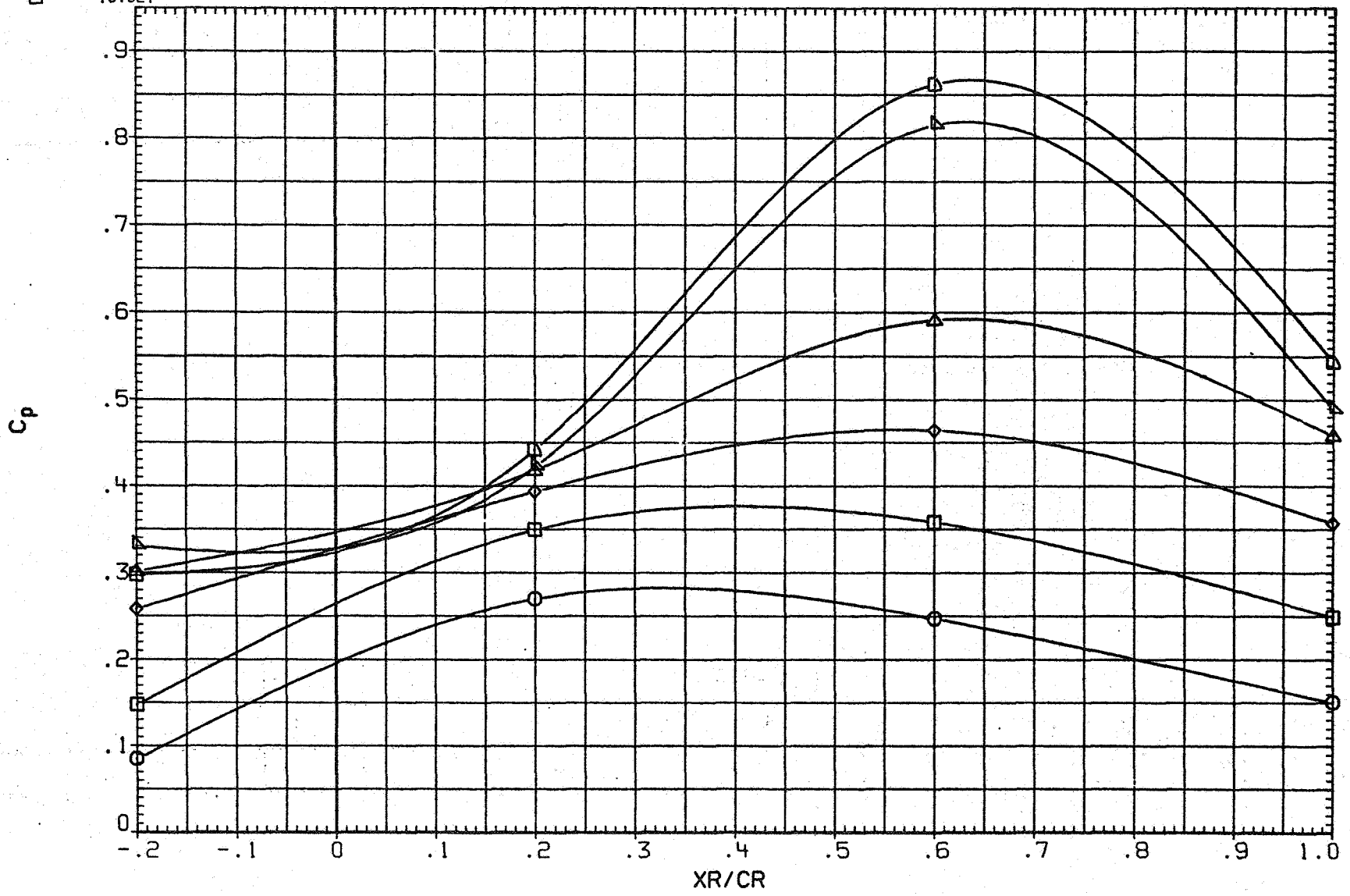

FIG 149 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

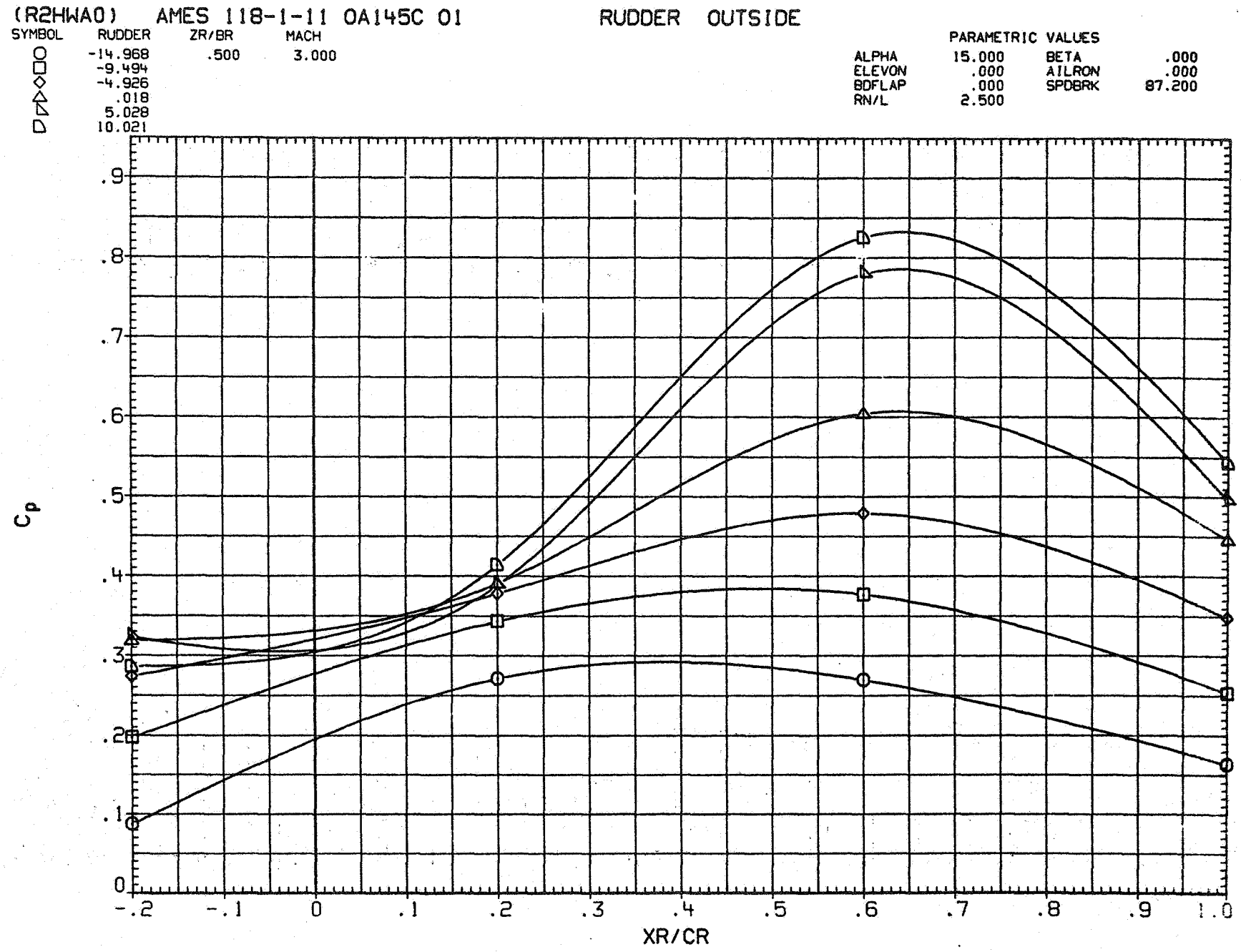

FIG 149 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

(R2HWA0) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.968	.600	3.000
□	-9.494		
◇	-4.926		
△	.018		
◁	5.028		
▷	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

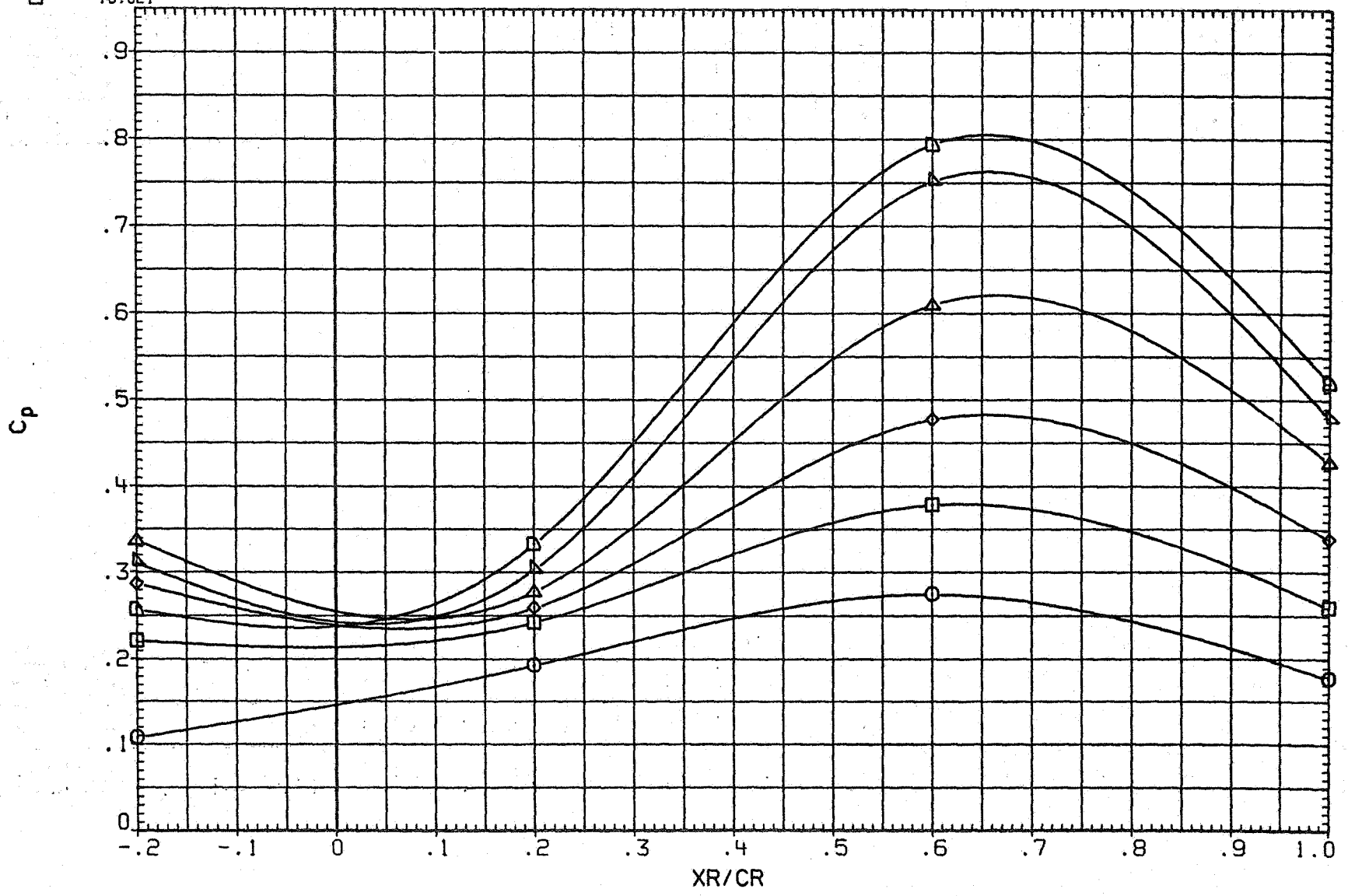

FIG 149 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

(R2HWA0) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.968	.700	3.000
□	-9.494		
◇	-4.926		
△	.018		
◁	5.028		
D	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

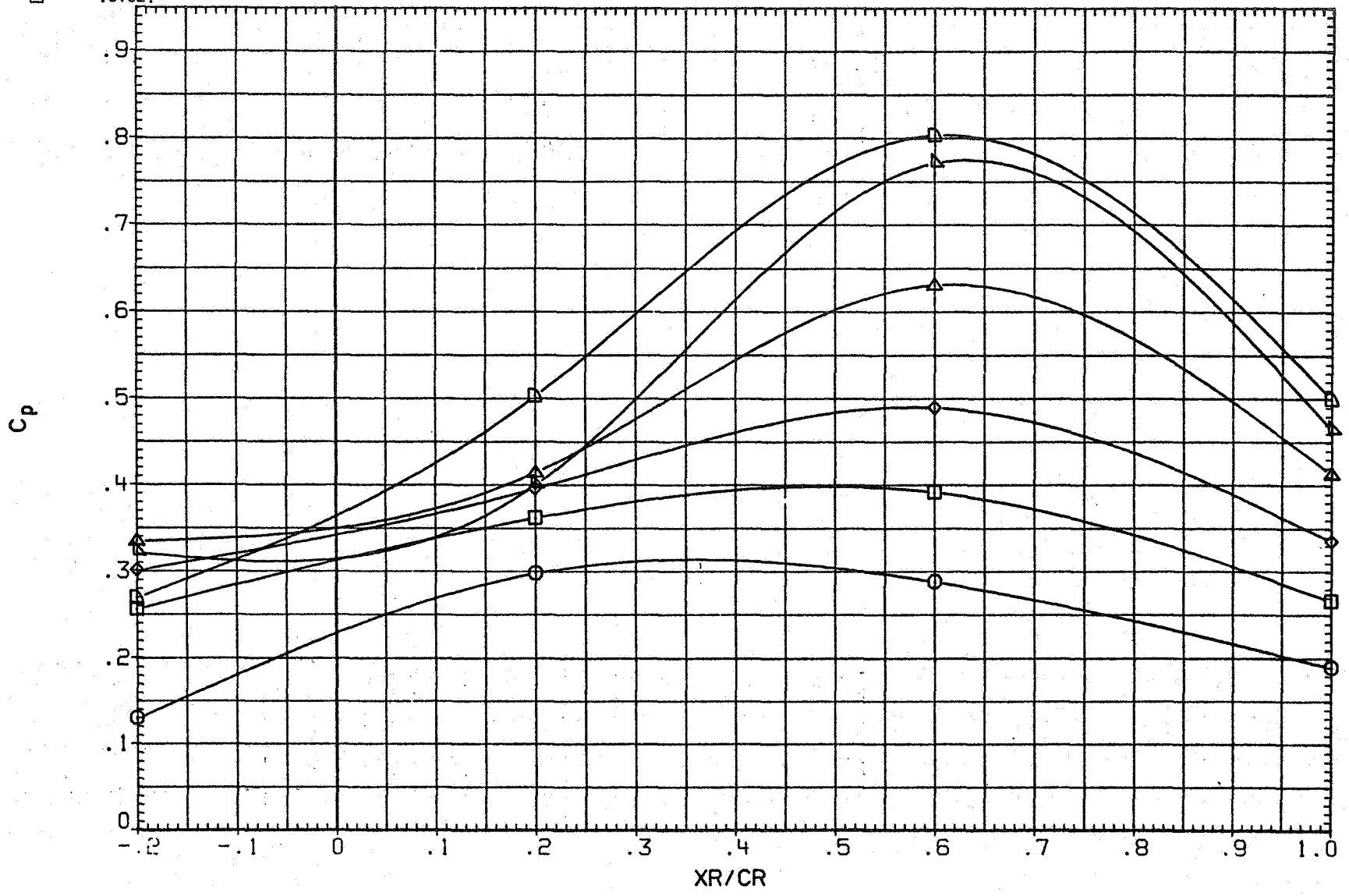

FIG 149 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

(R2HWA0) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.968	.800	3.000
□	-9.494		
◇	-4.926		
△	.018		
⊿	5.028		
▱	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

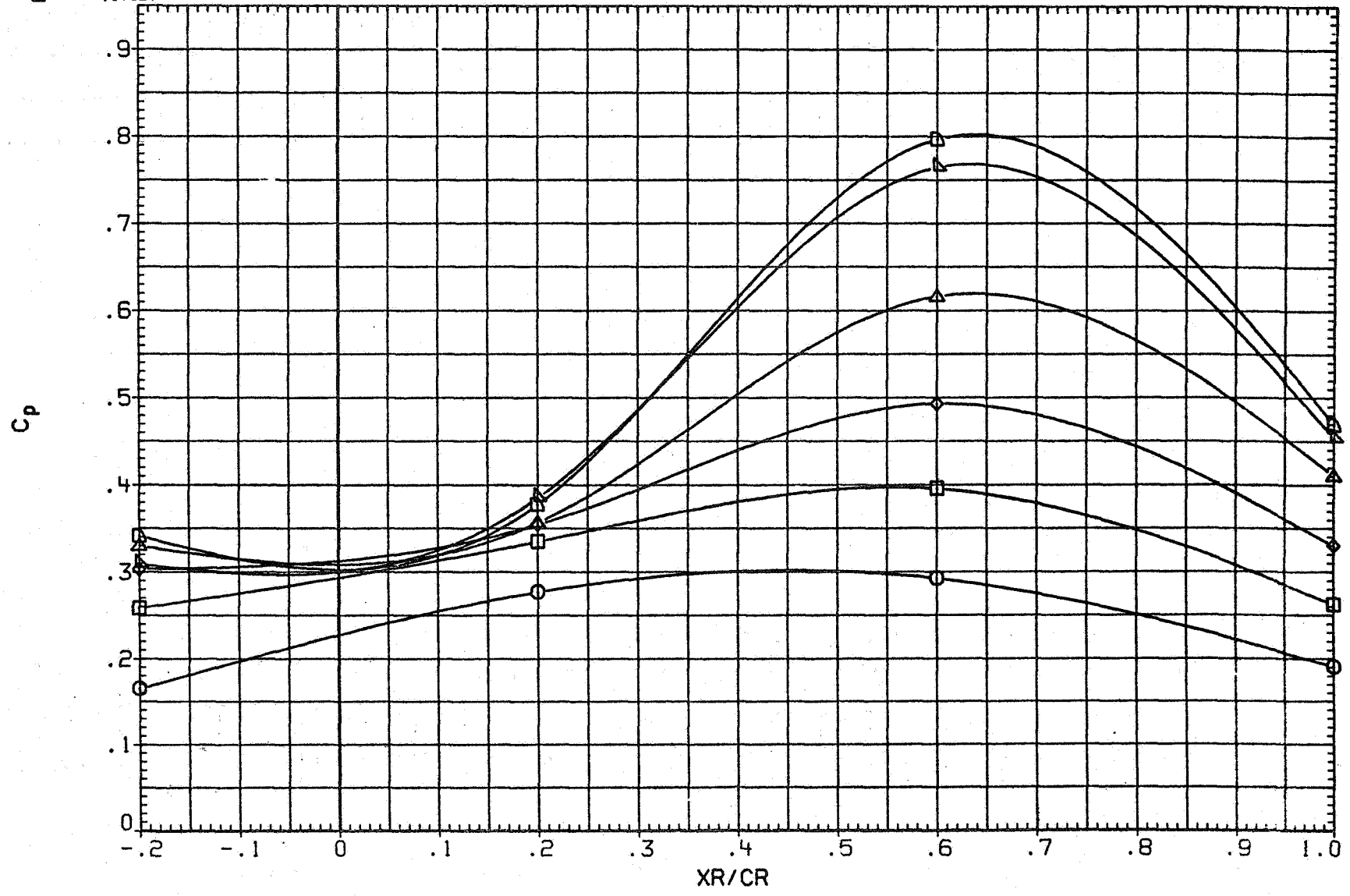

FIG 149 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

(R2HWA0) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	ZR/BR	MACH
○	-14.968	.900	3.000
□	-9.494		
◇	-4.926		
△	.018		
◁	5.028		
▷	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

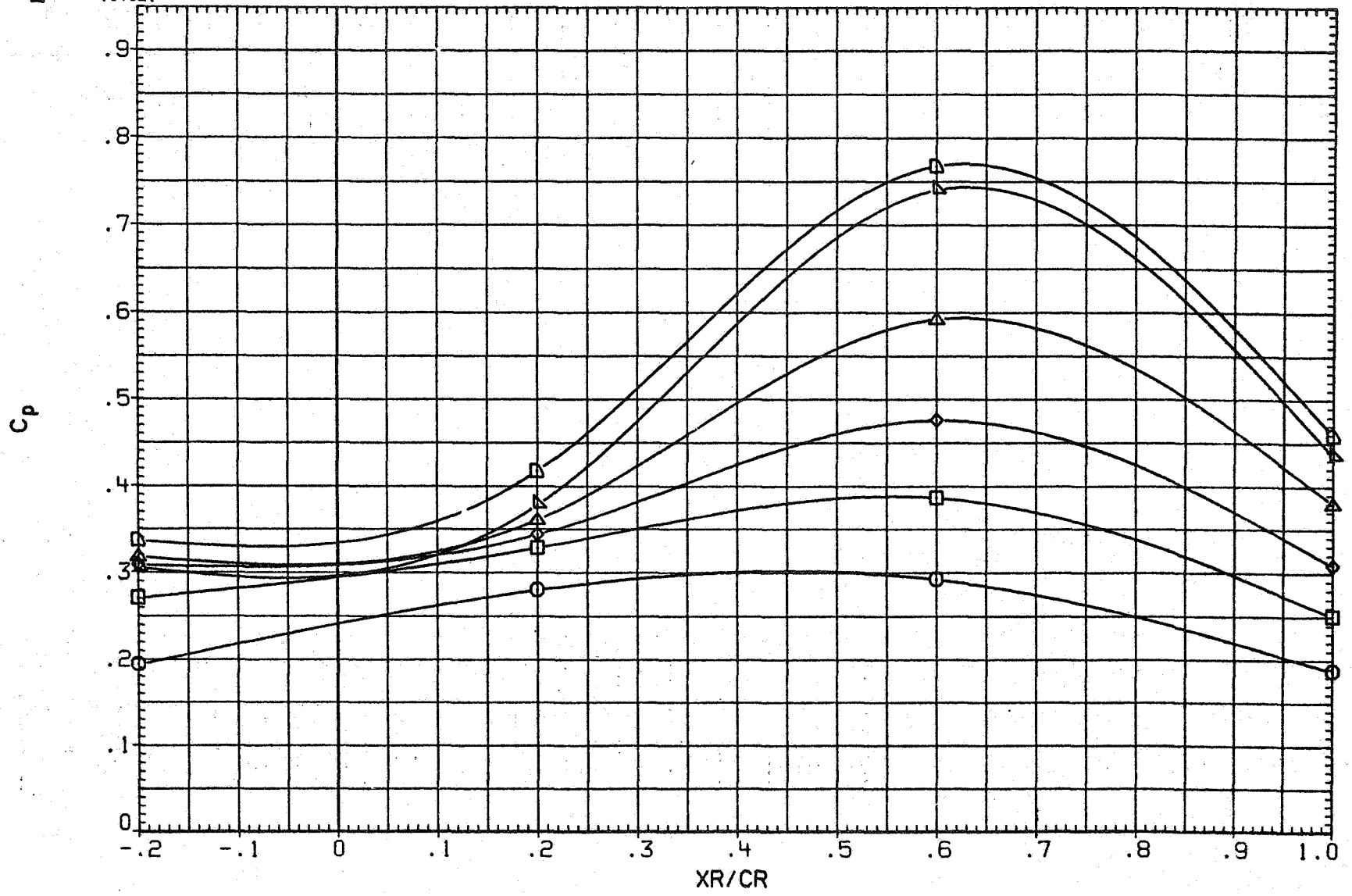

FIG 149 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	◺	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

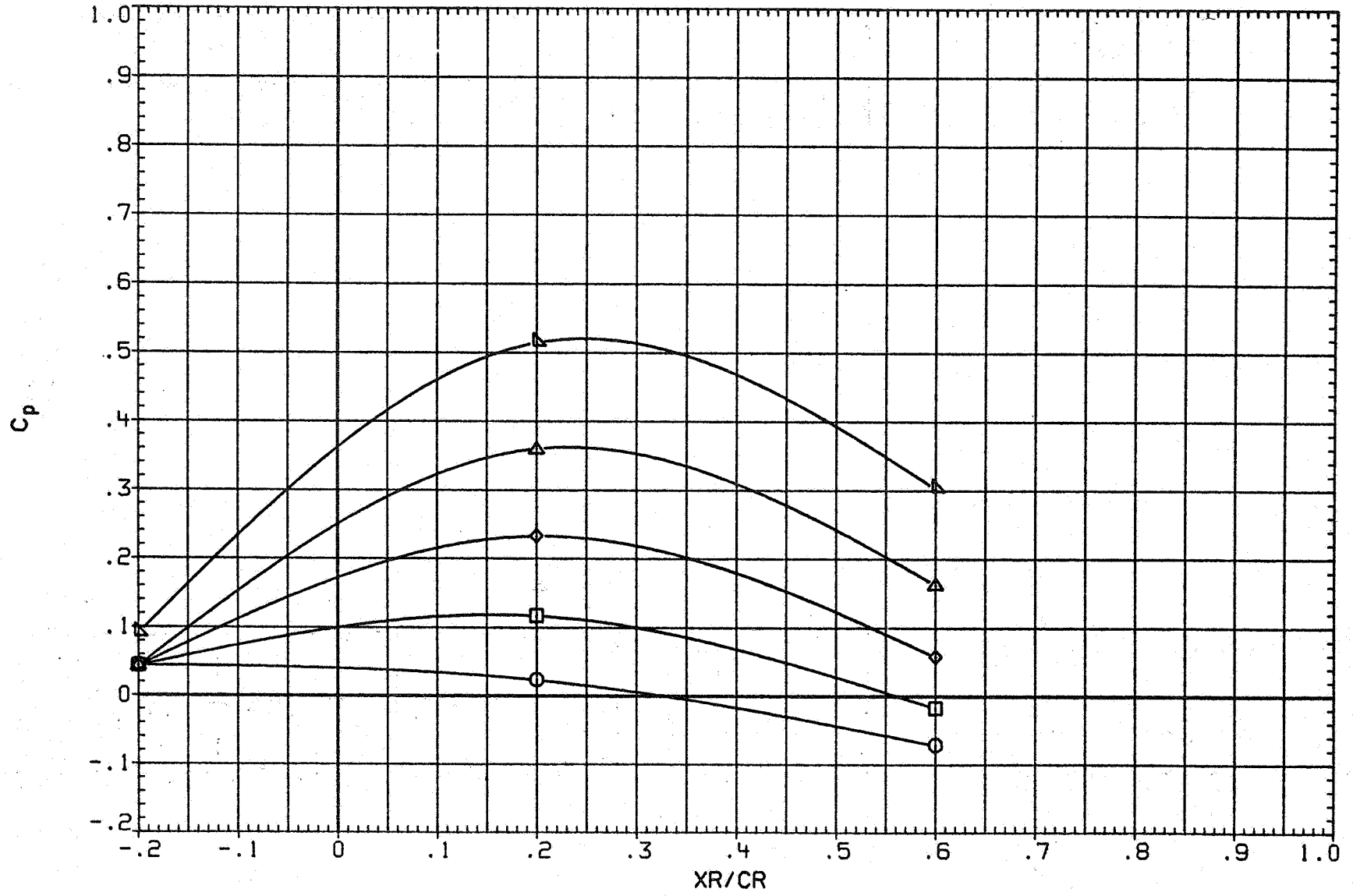

FIG 150 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .100

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	◺	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

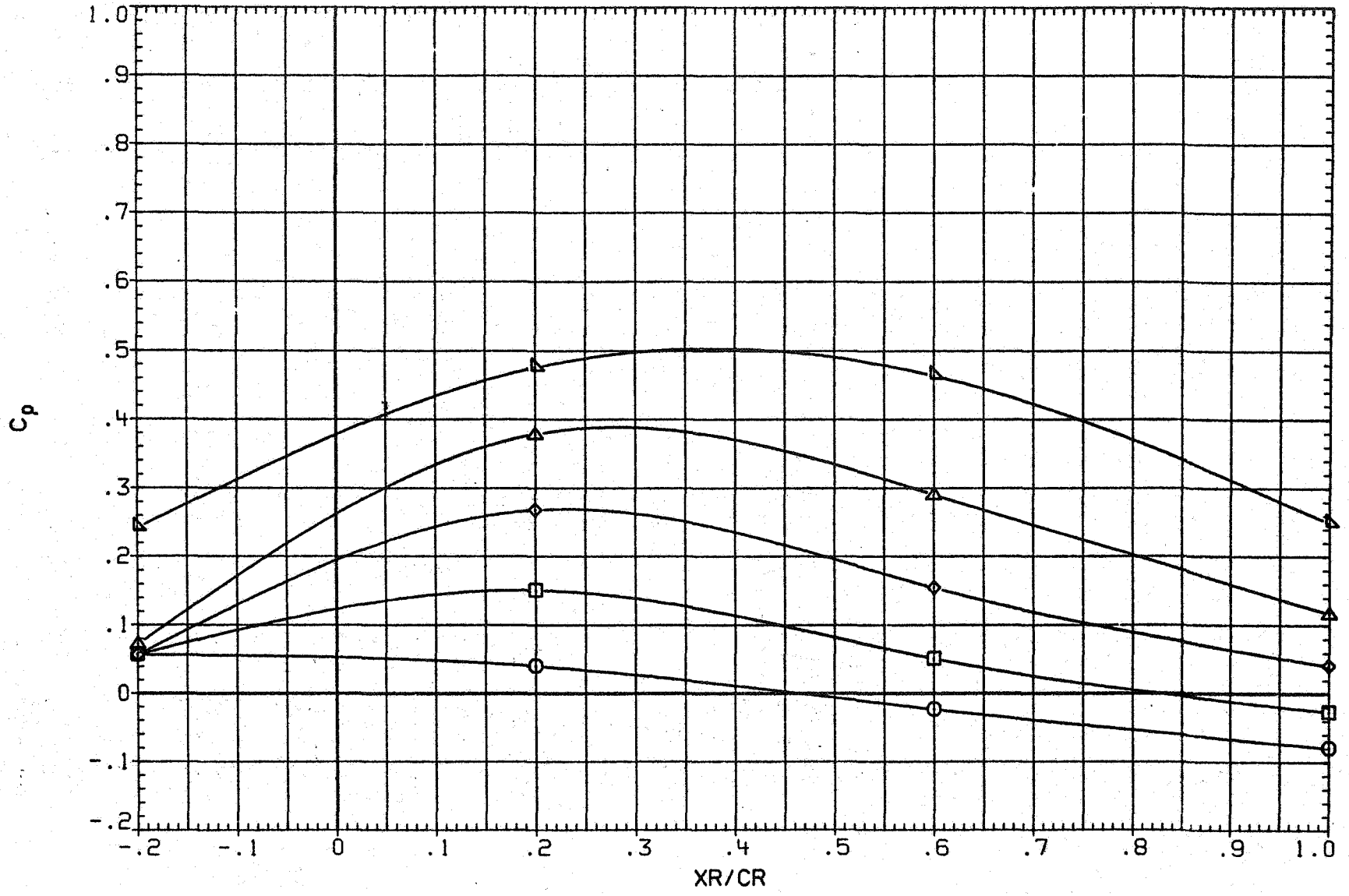

FIG 150 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 OA145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 OA145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 OA145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 OA145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	◺	AMES 118-1-11 OA145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

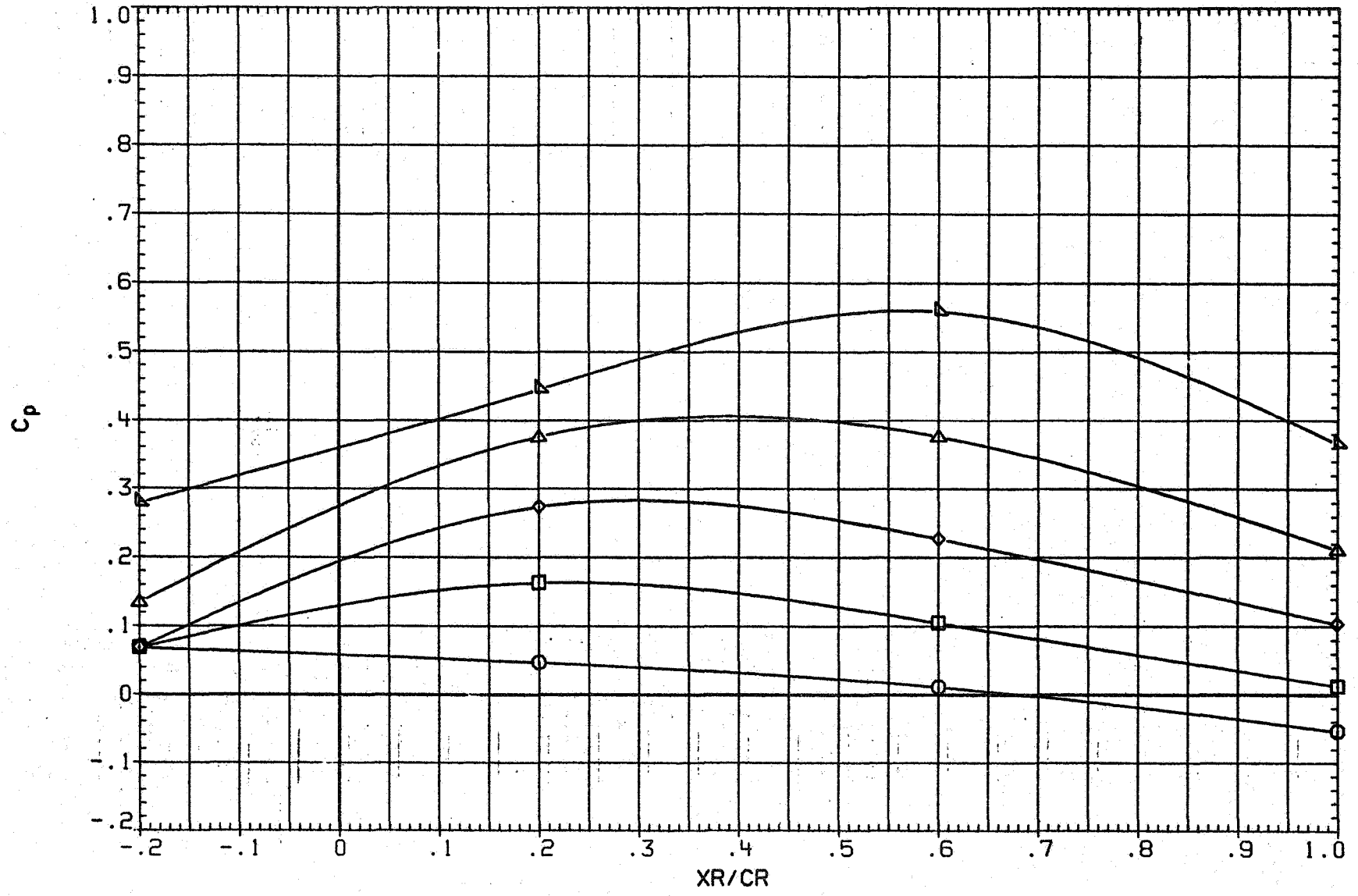

FIG 150 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 OA145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 OA145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 OA145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 OA145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	◺	AMES 118-1-11 OA145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

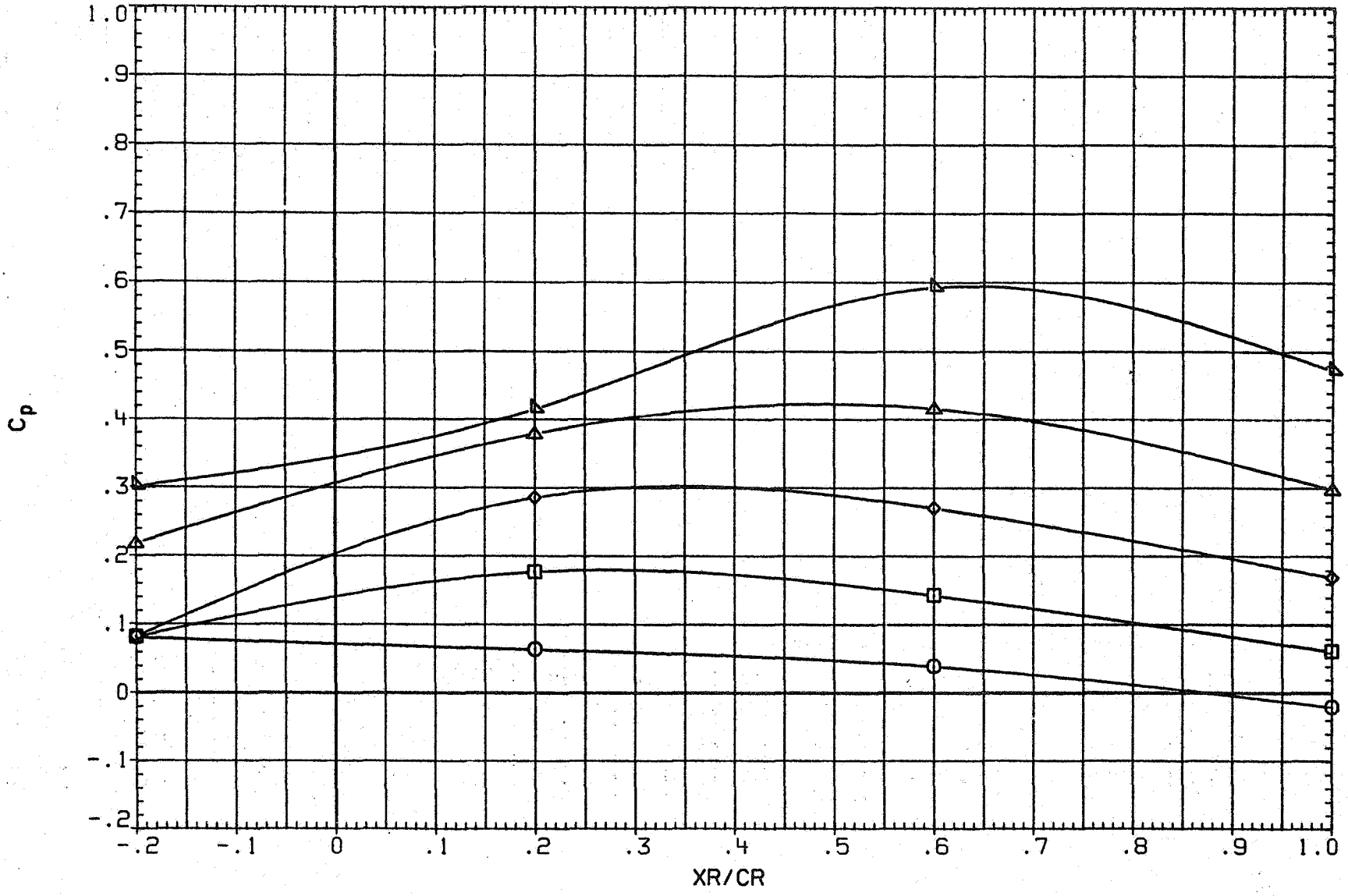

FIG 150 OA145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	▷	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

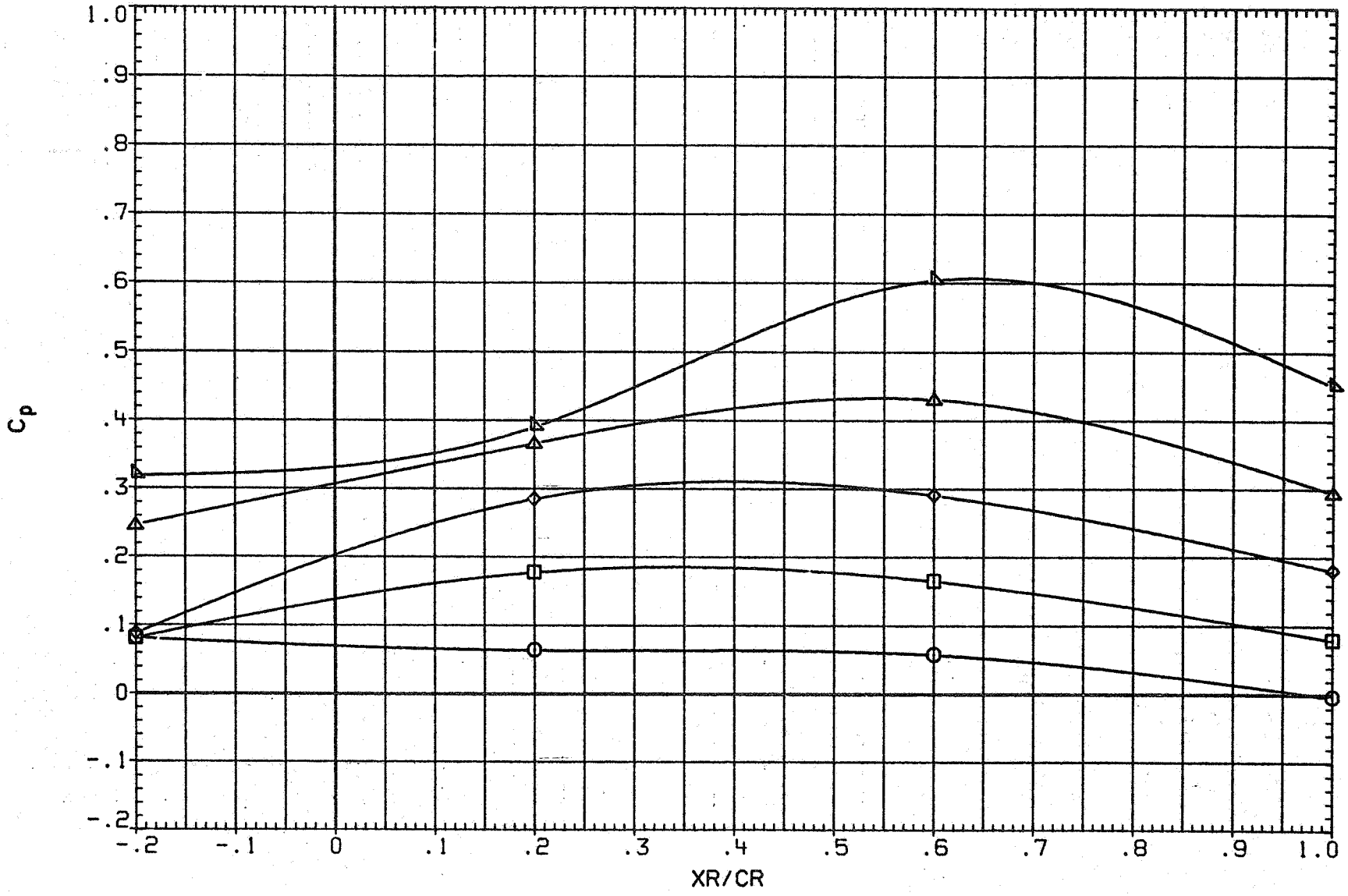

FIG 150 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	◺	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

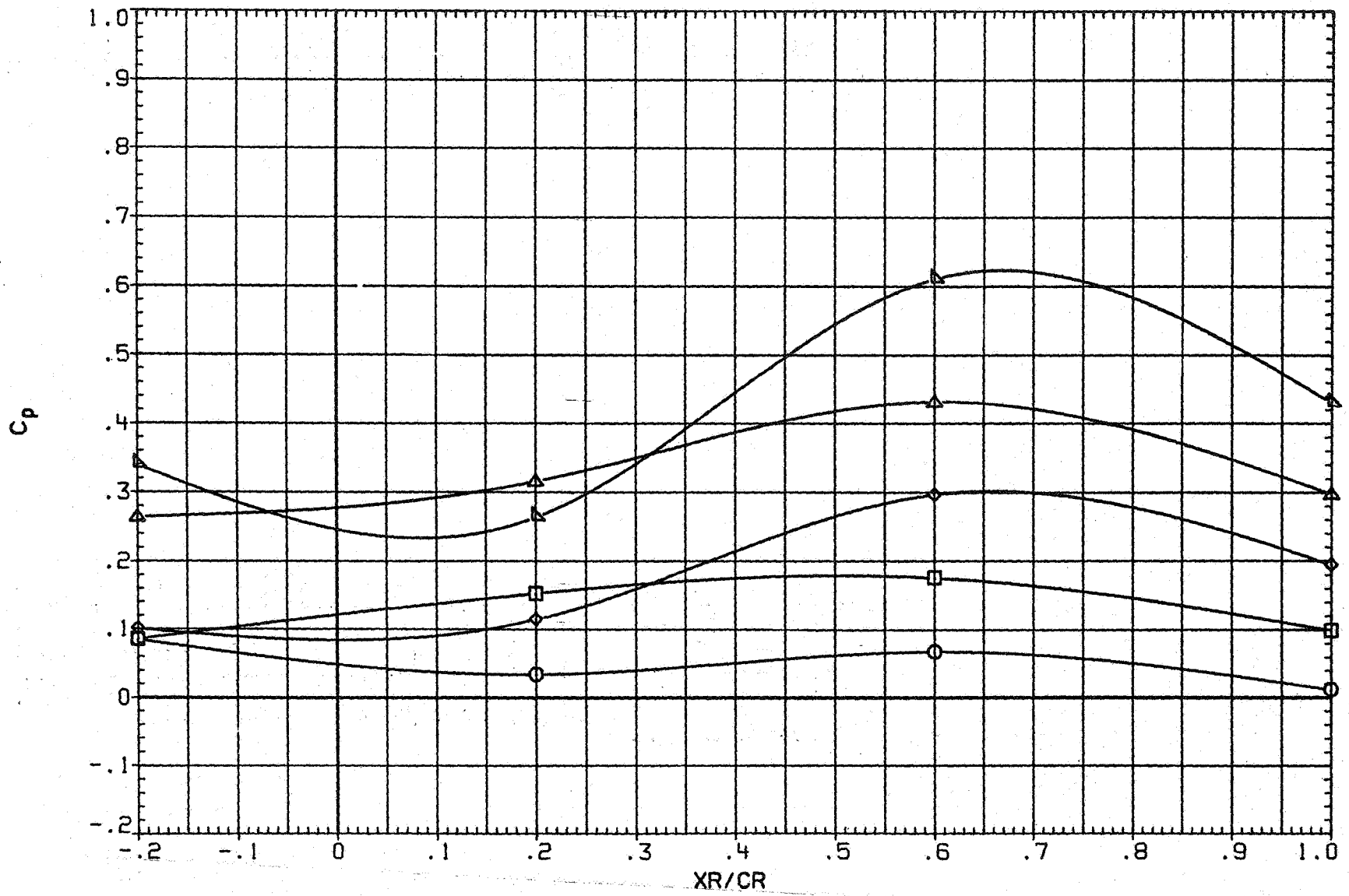

FIG 150 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	◺	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

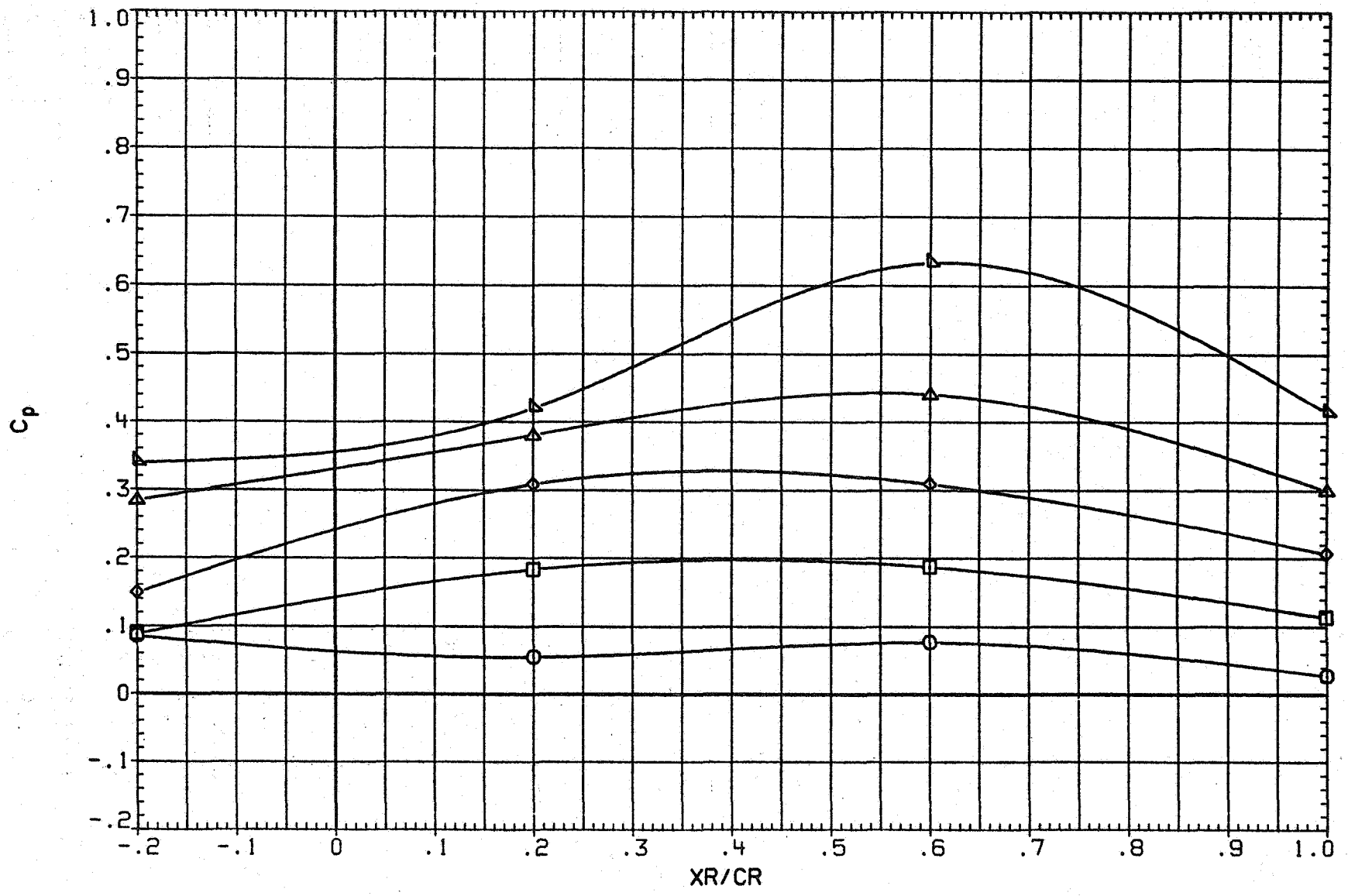

FIG 150 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	◁	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

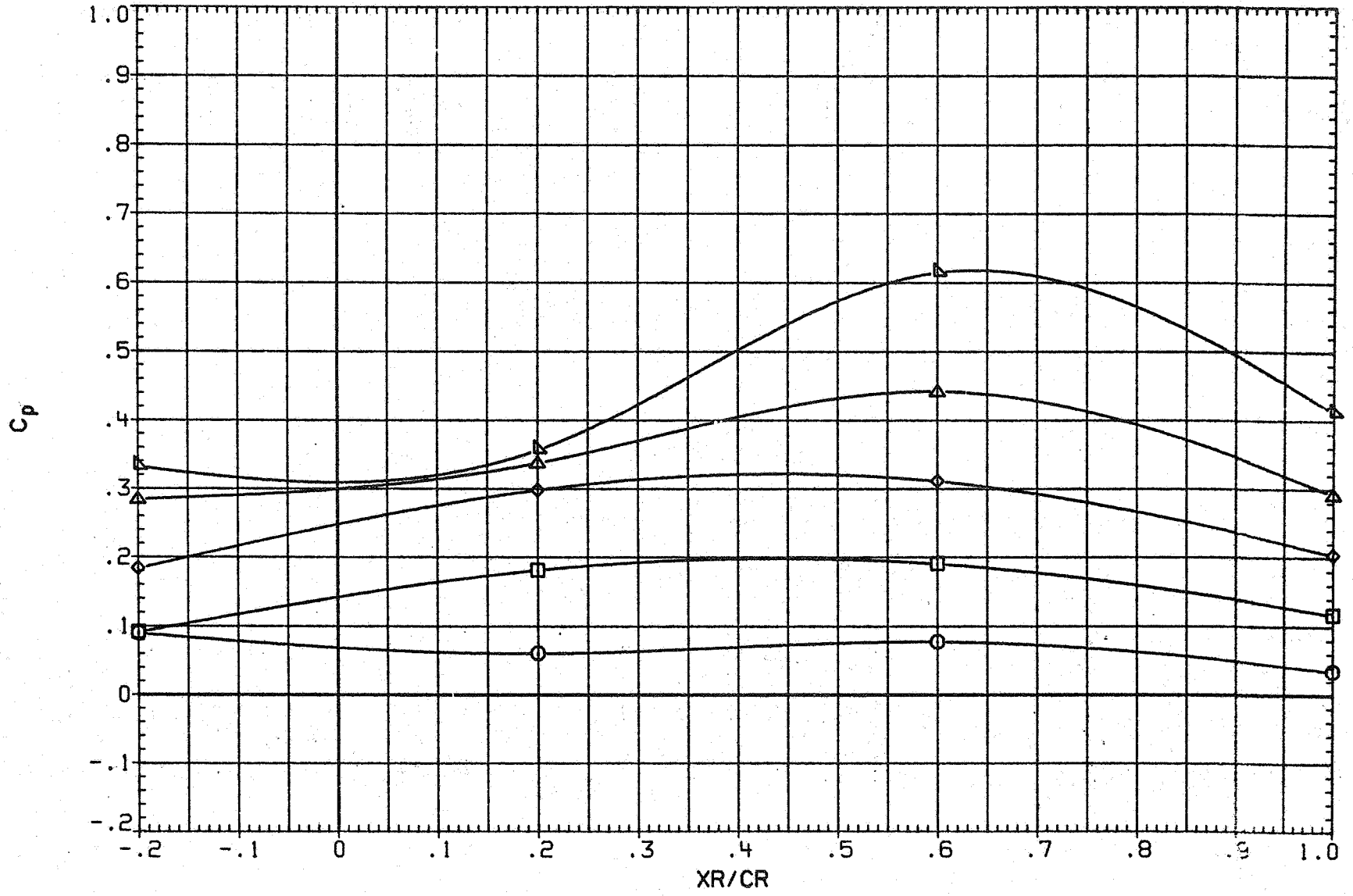

FIG 150 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	◺	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

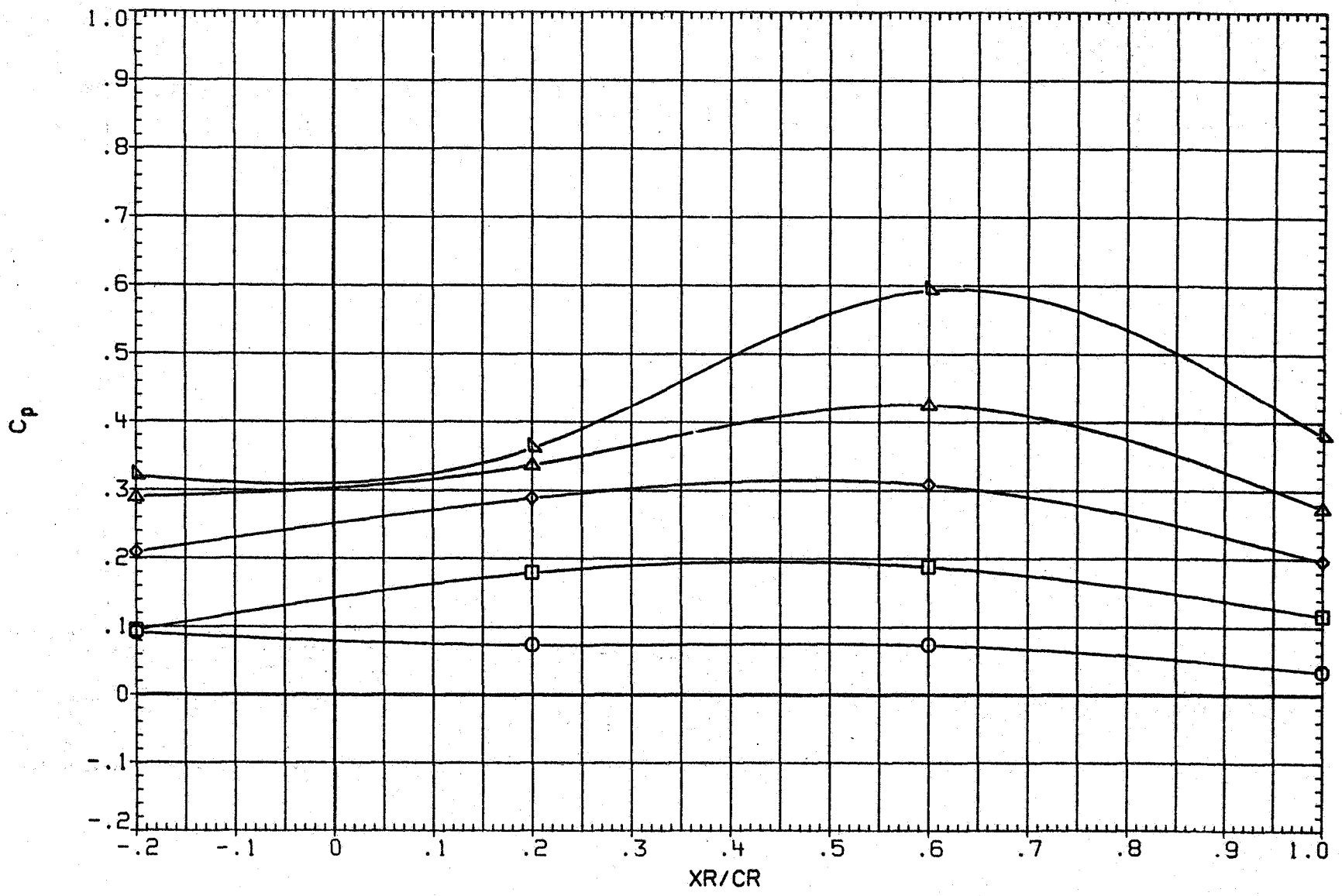

FIG 150 0A145C SPEED BRAKE CP VS. XR/CR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 ZR/BR = .900

(R2HX02) AMES 118-1-11 OA145C C1 RUDDER INSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.182	.200	3.001
□	5.307		
◇	9.949		
◁	15.196		
△	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

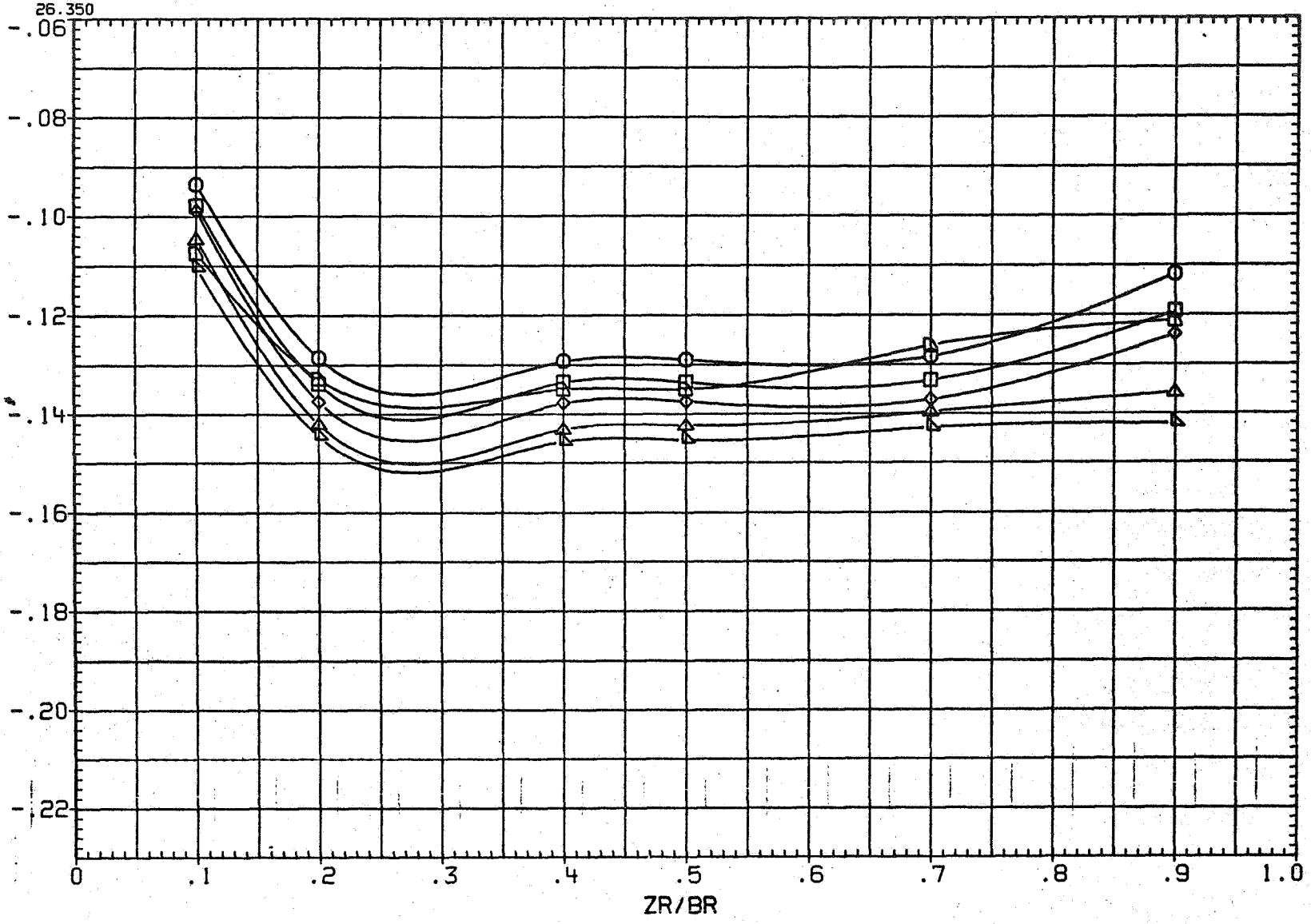

FIG 151 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 55

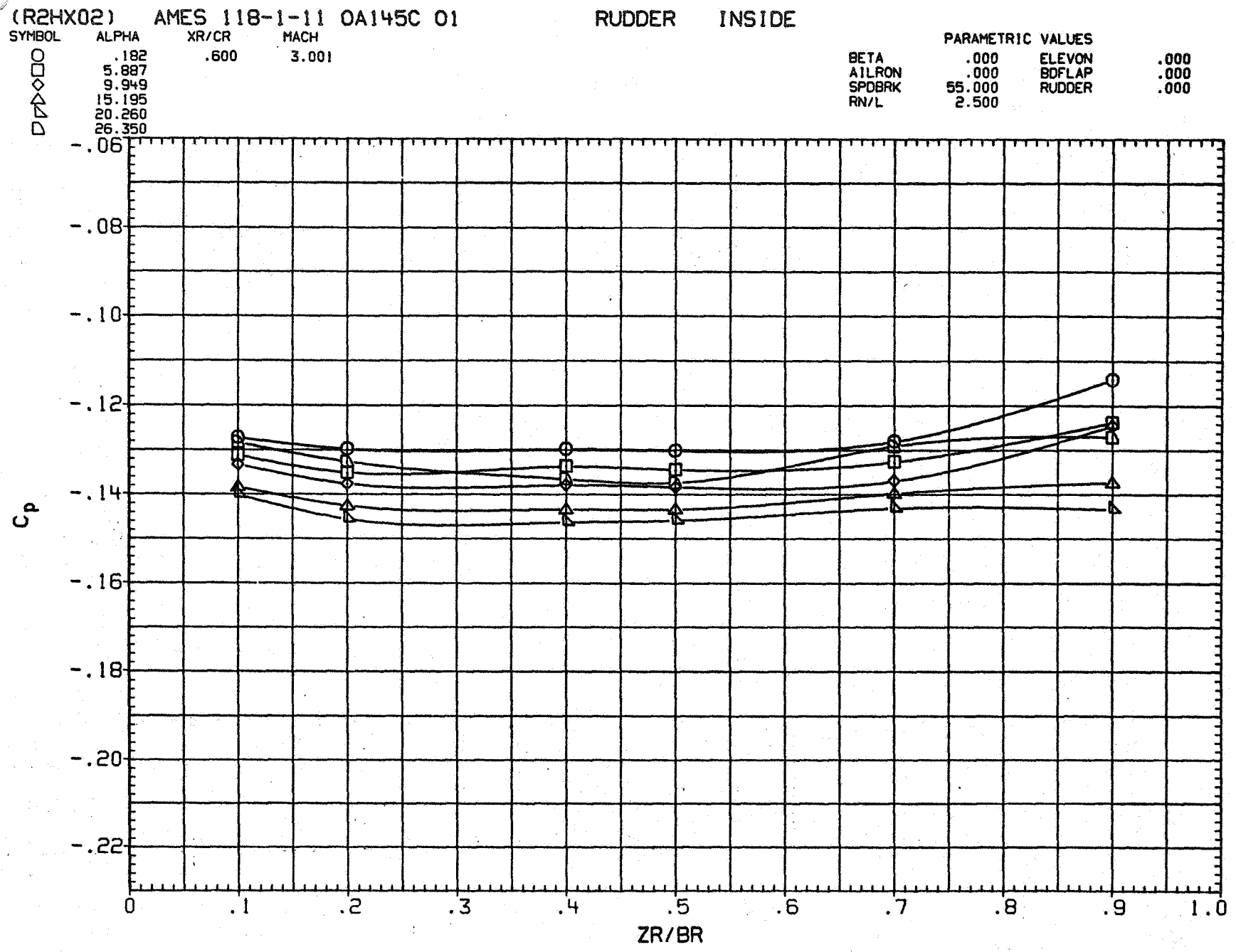

FIG 151 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HX02) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.182	1.000	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

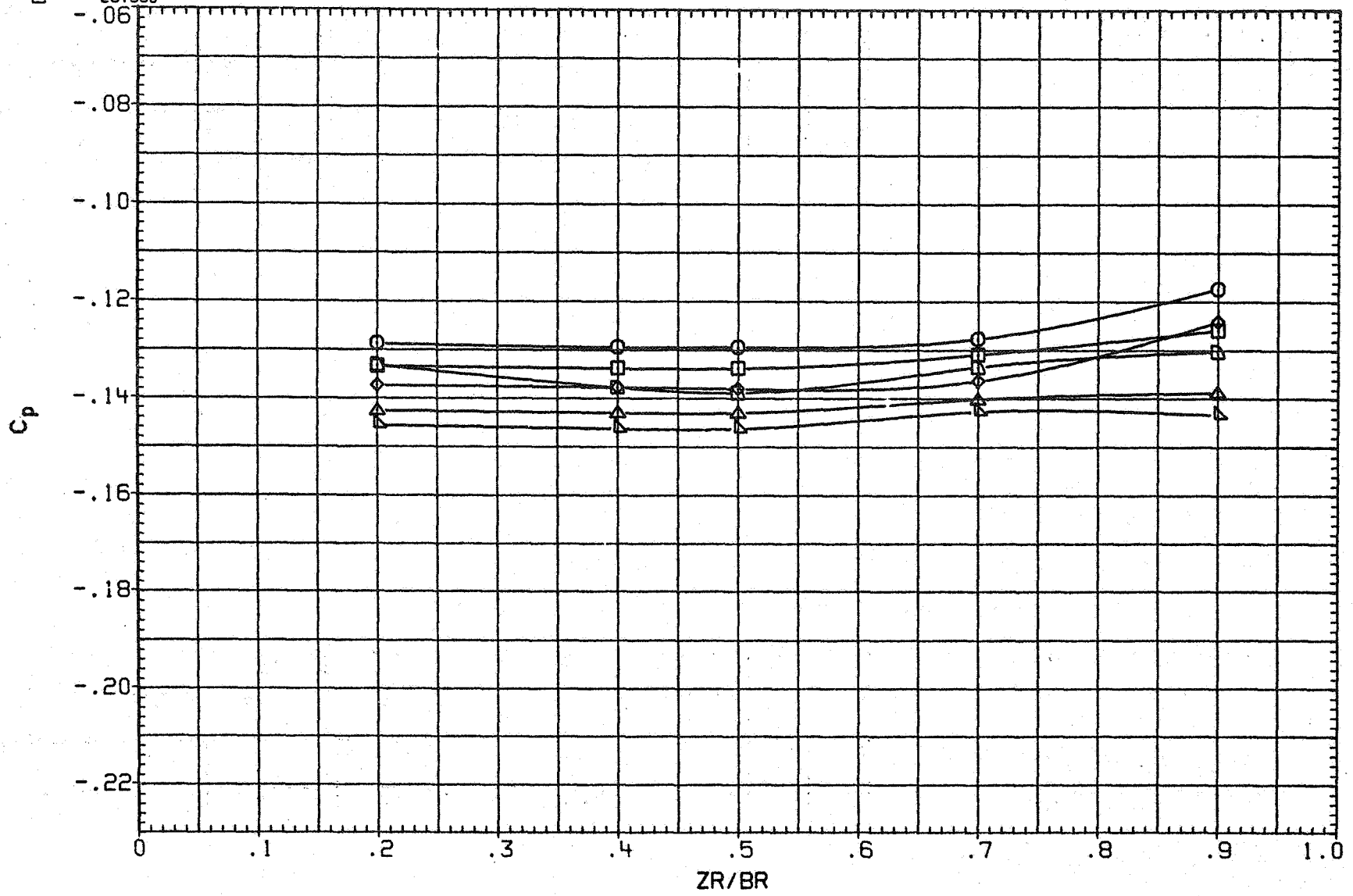

FIG 151 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HXS4) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.186	.200	3.000
□	4.984		
◇	10.029		
△	15.190		
▷	20.237		
D	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

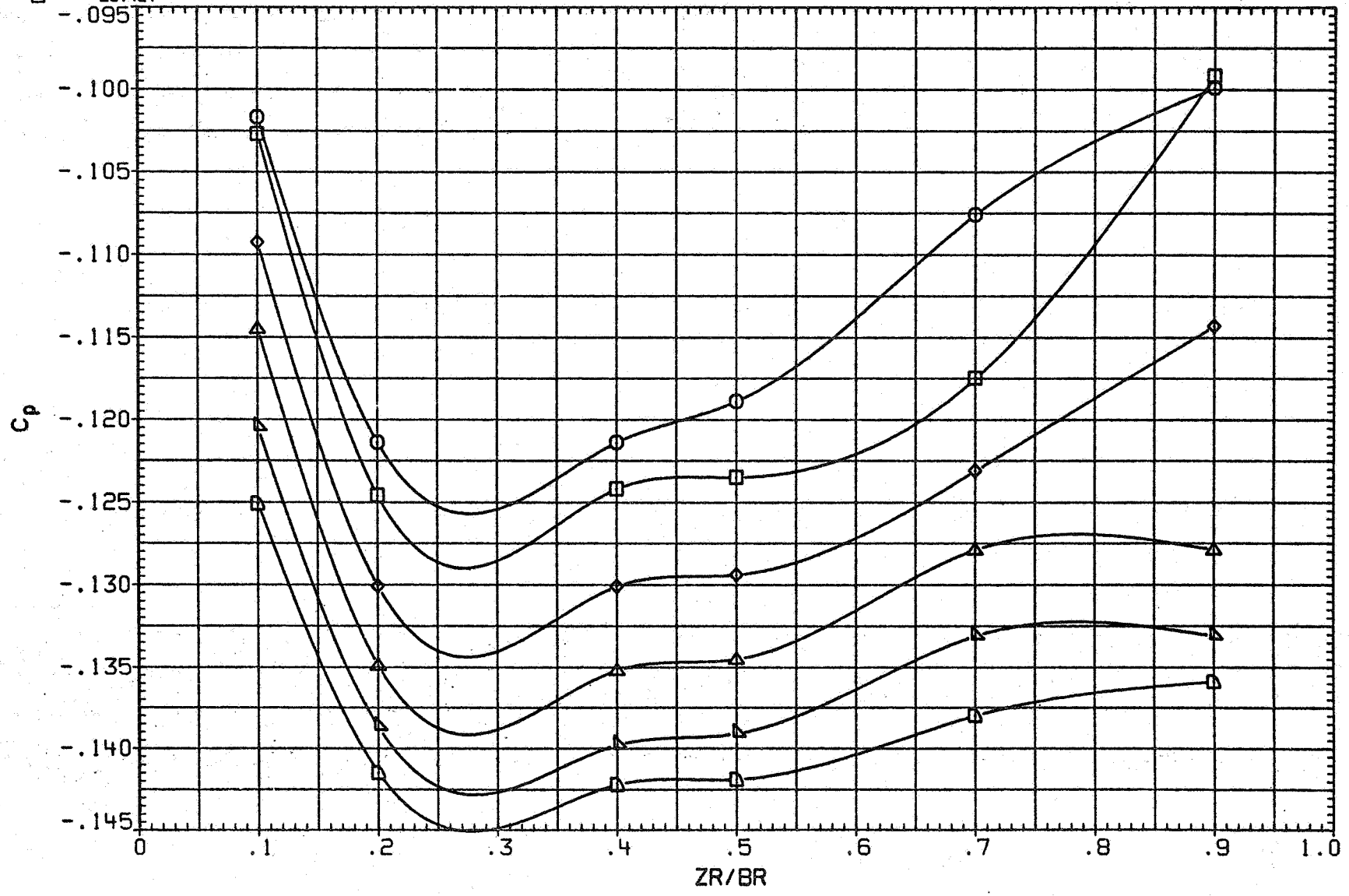

FIG 152 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HX64) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.186	.600	3.000
□	4.984		
◇	10.029		
△	15.190		
▷	20.237		
▷	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

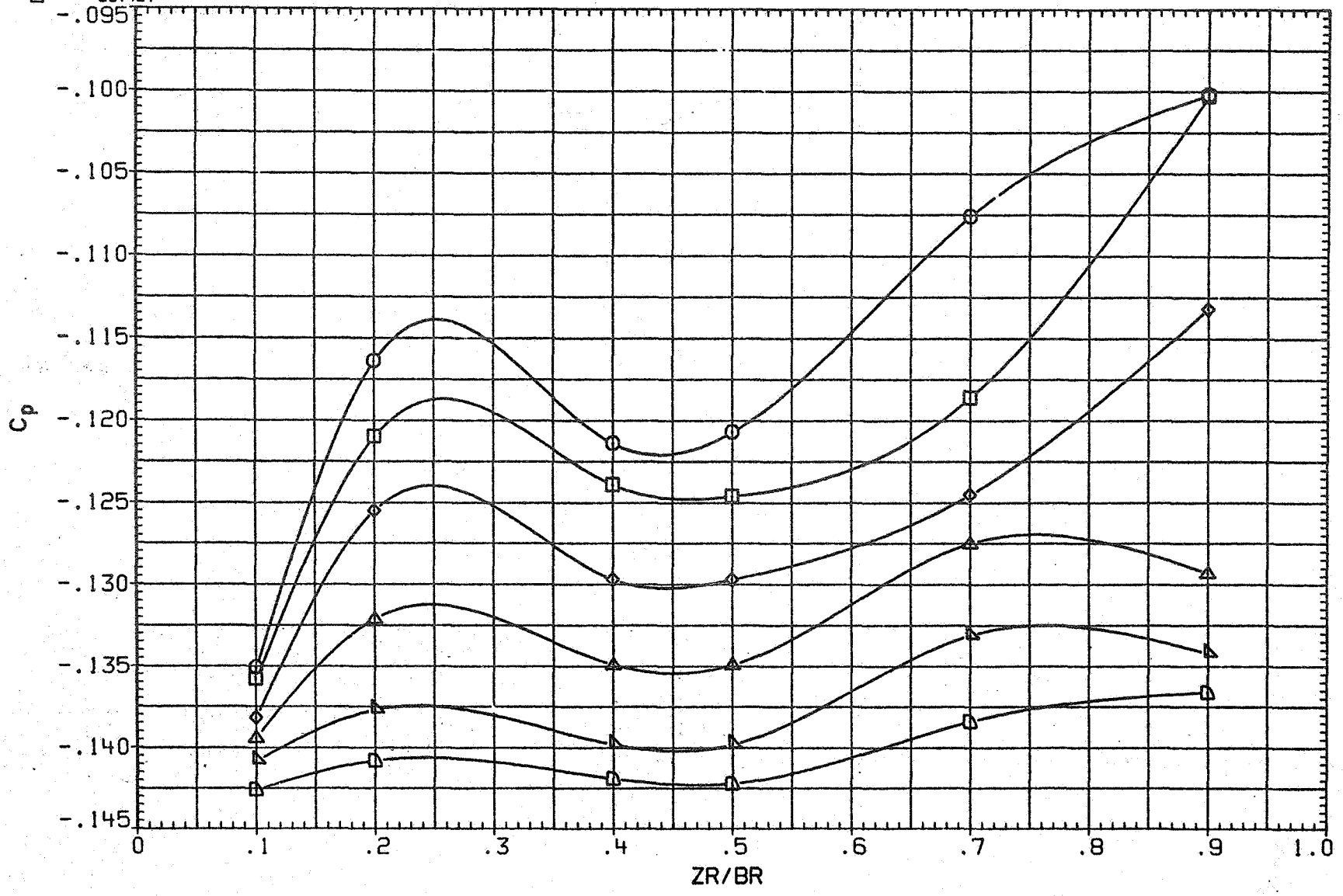

FIG 152 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 25

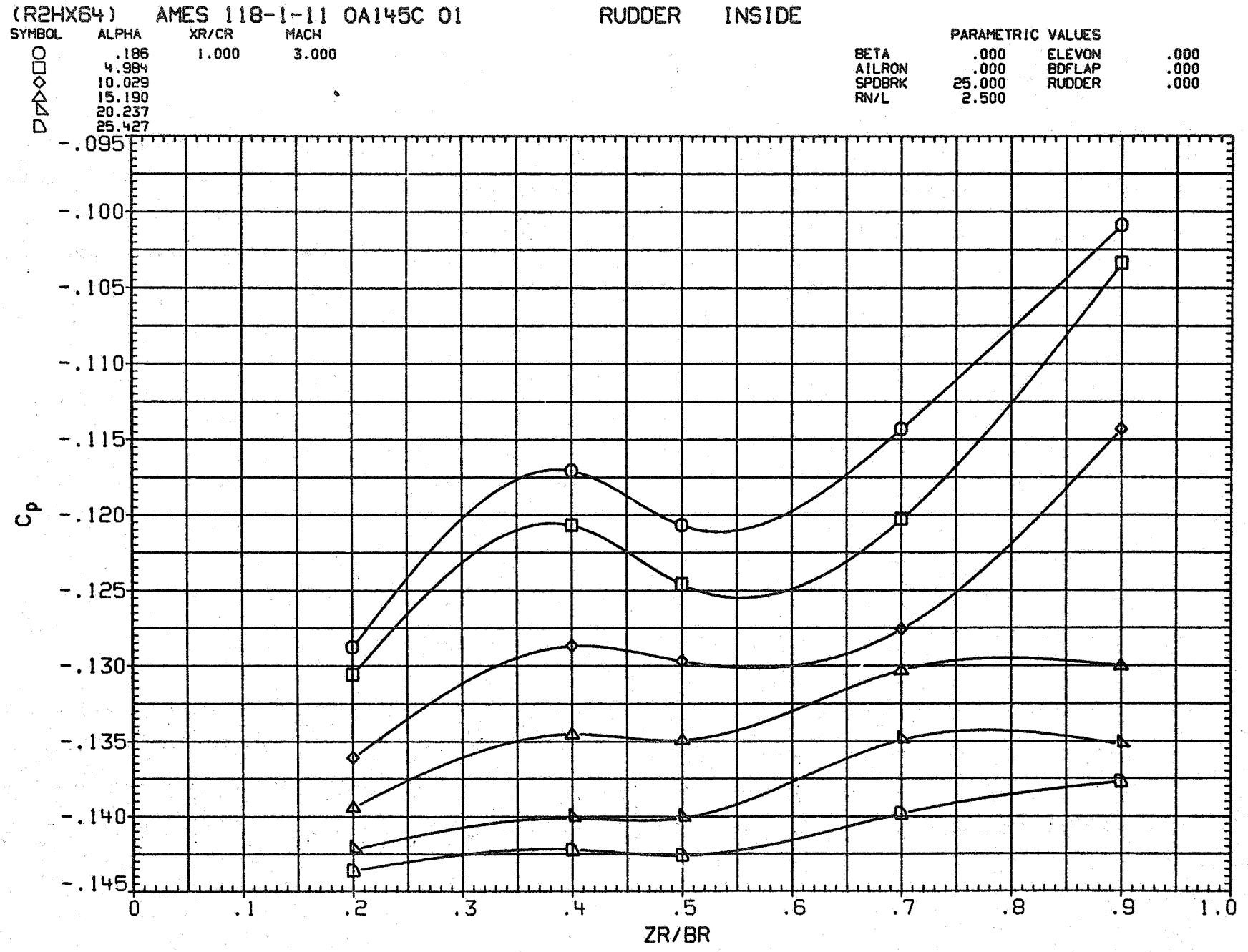

FIG 152 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 25

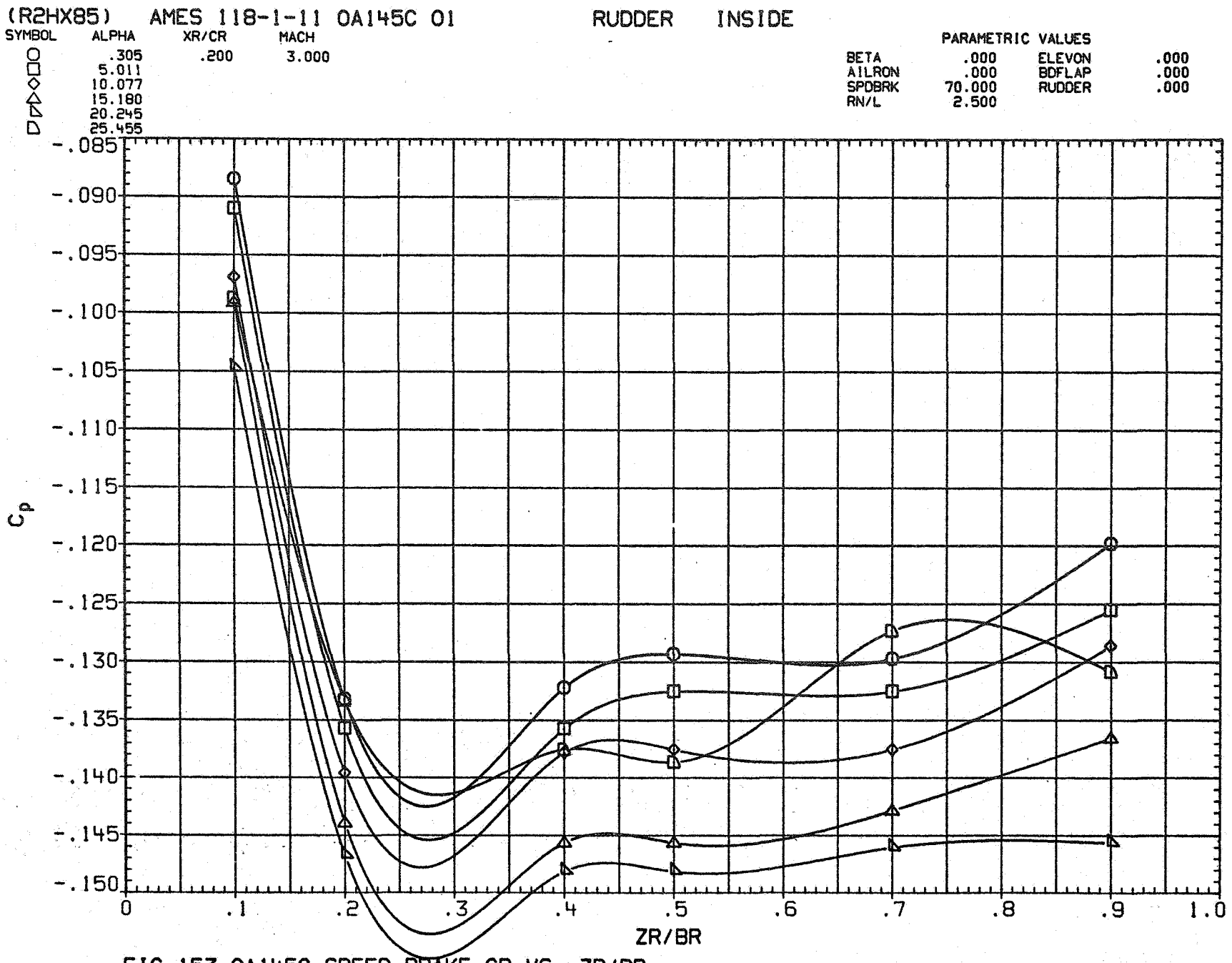

FIG 153 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HX85) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.305	.600	3.000
□	5.011		
◇	10.077		
◁	15.180		
△	20.245		
▷	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

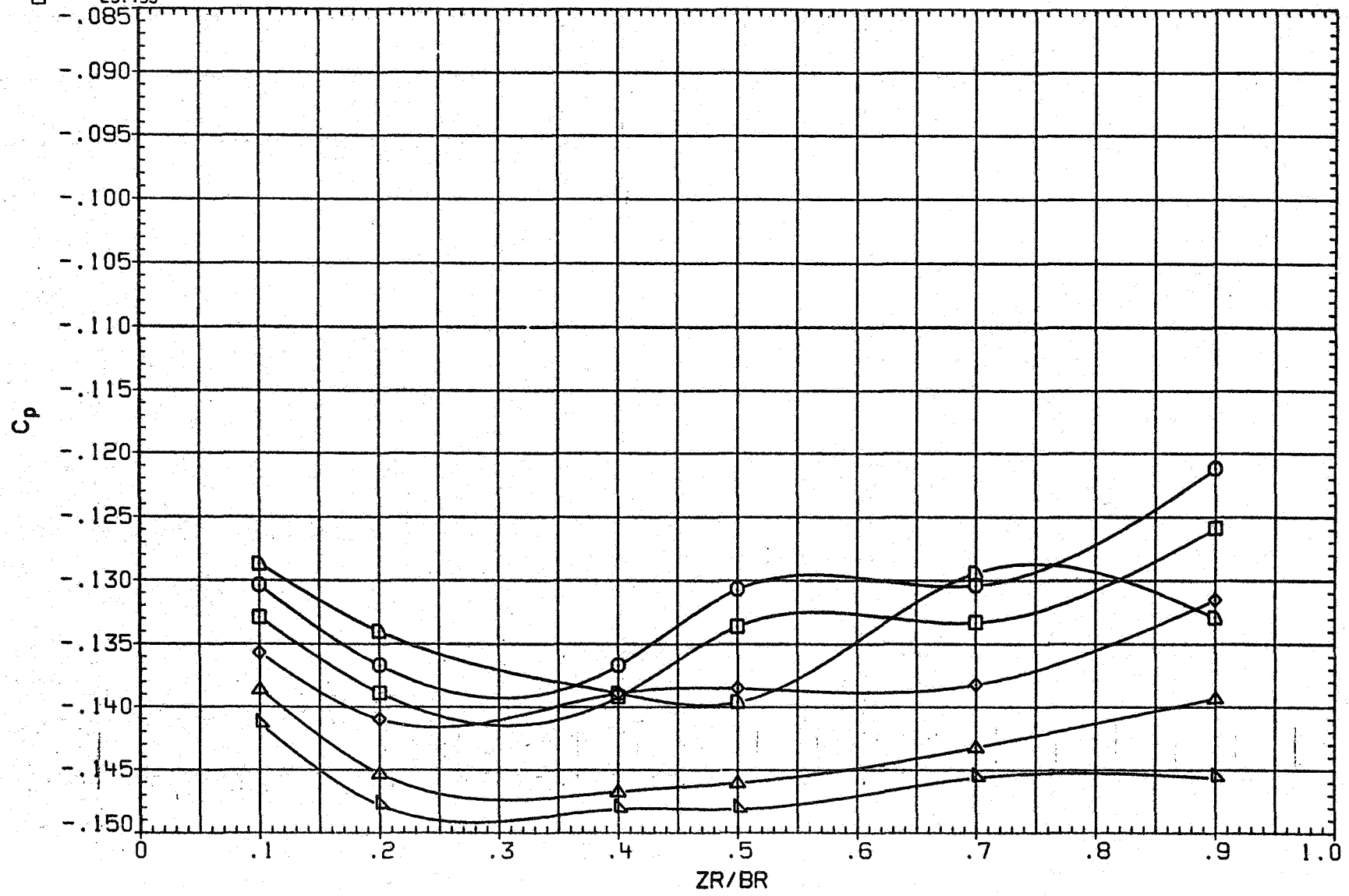

FIG 153 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HX85) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.305	1.000	3.000
□	5.011		
◇	10.077		
◁	15.180		
△	20.245		
▷	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

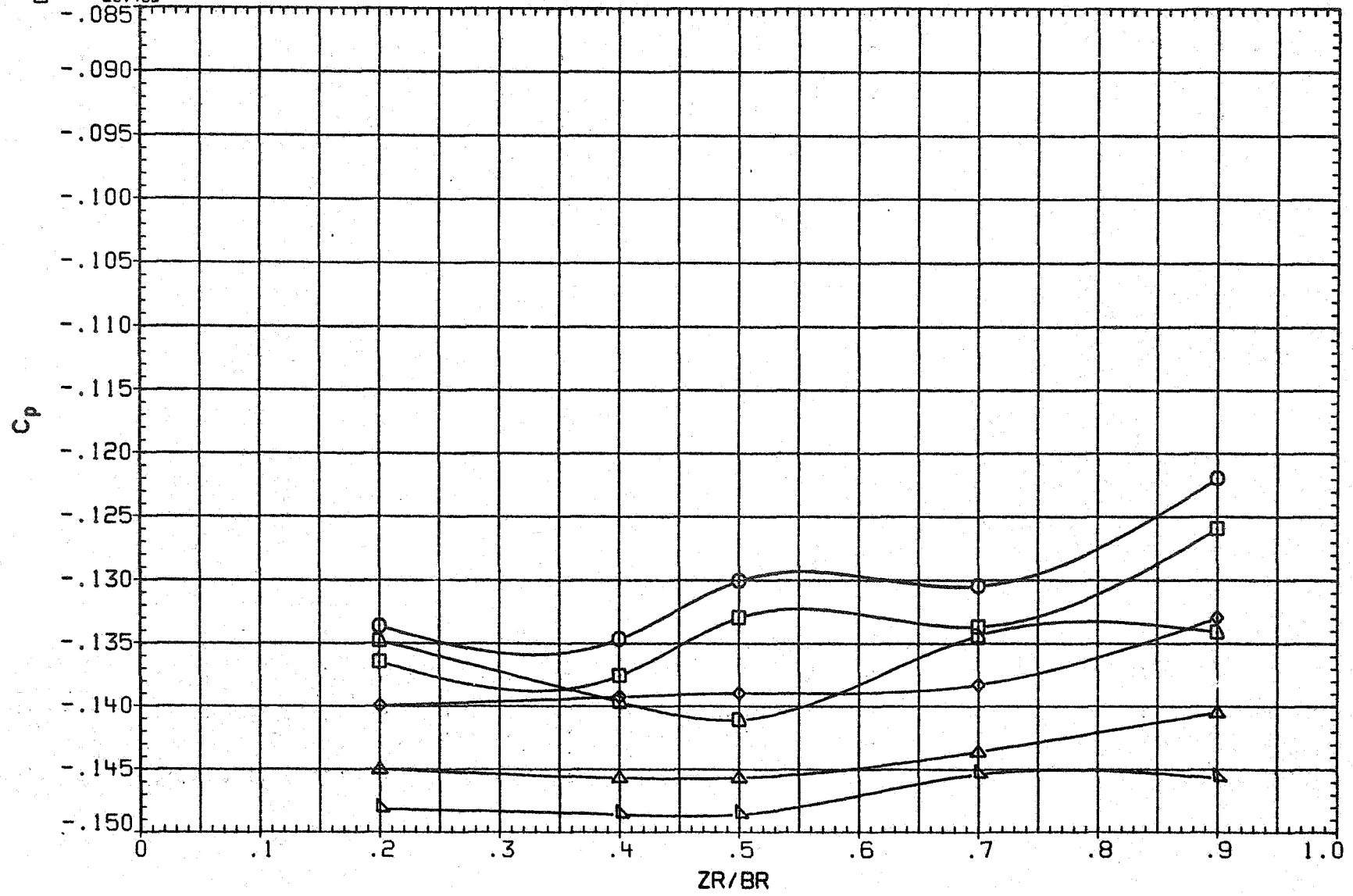

FIG 153 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 70

SYMBOL	ALPHA	XR/CR	MACH
○	.175	.200	3.000
□	5.049		
◇	10.118		
△	15.169		
◁	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

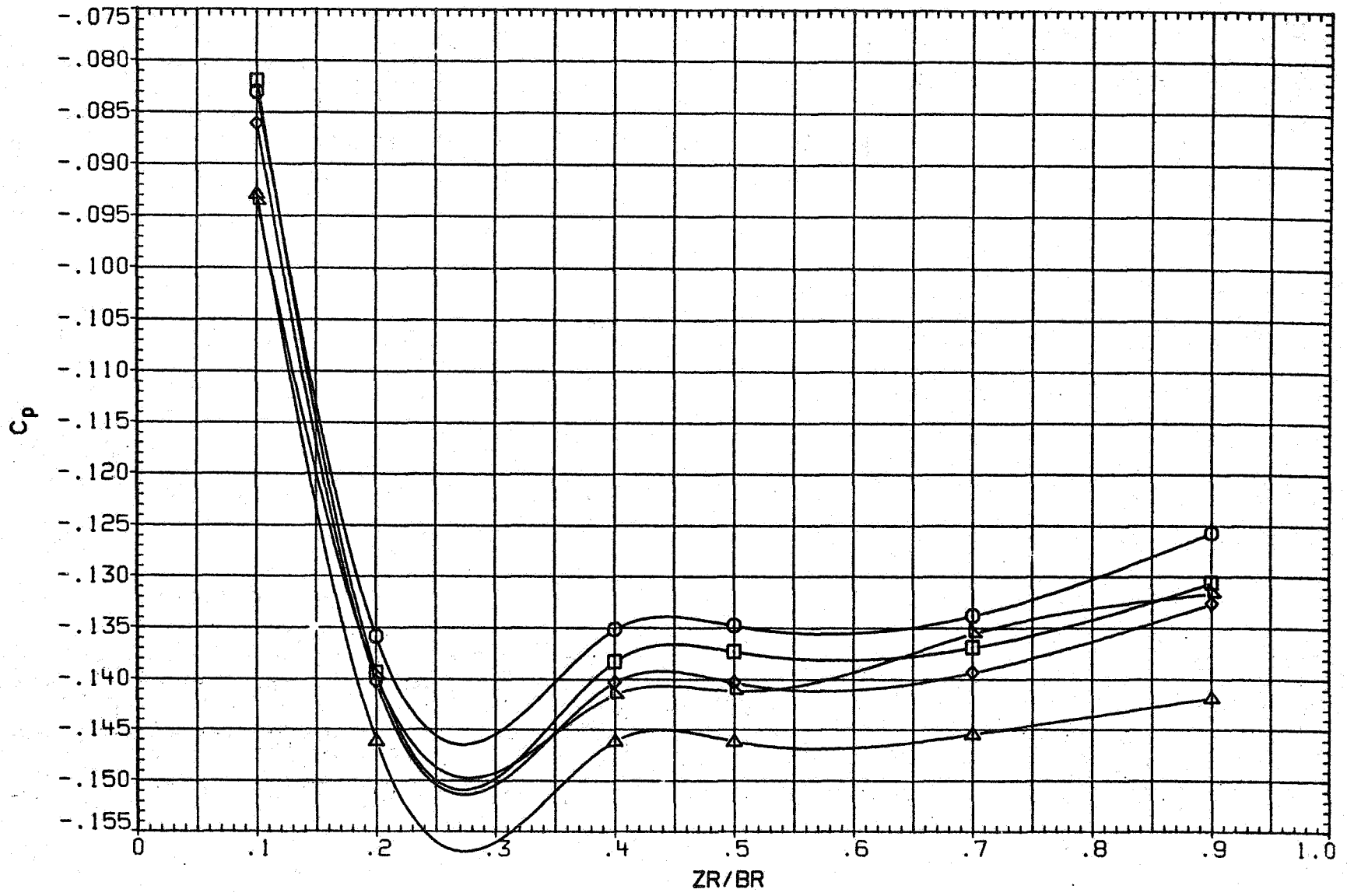

FIG 154 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HX94) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.175	.600	3.000
□	5.049		
◇	10.118		
△	15.169		
◁	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

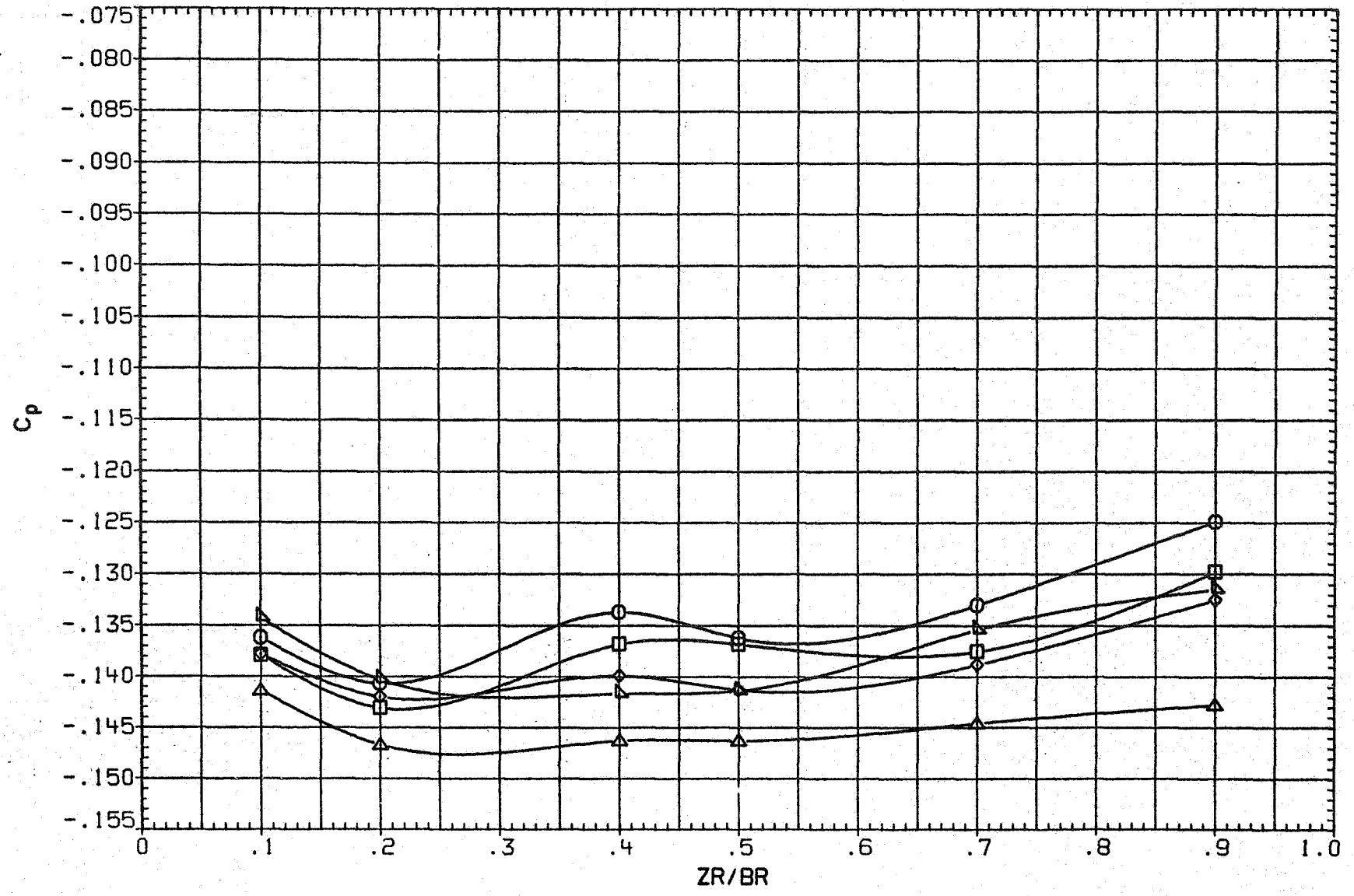

FIG 154 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HX94) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.175	1.000	3.000
□	5.049		
◇	10.118		
△	15.169		
◺	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

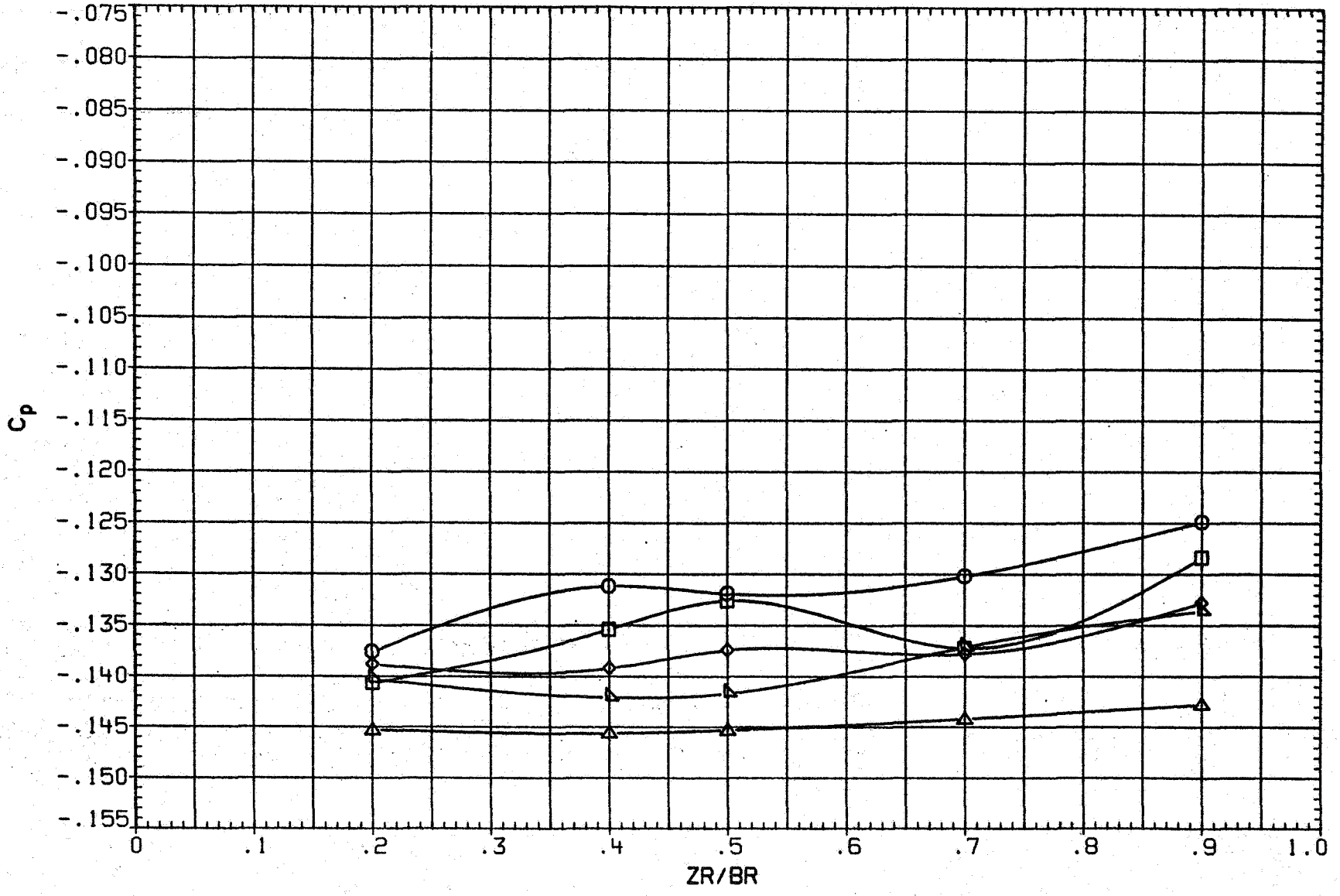

FIG 154 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HX07) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.307	.200	3.001
□	-2.116		
◇	.008		
△	2.137		
◁	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

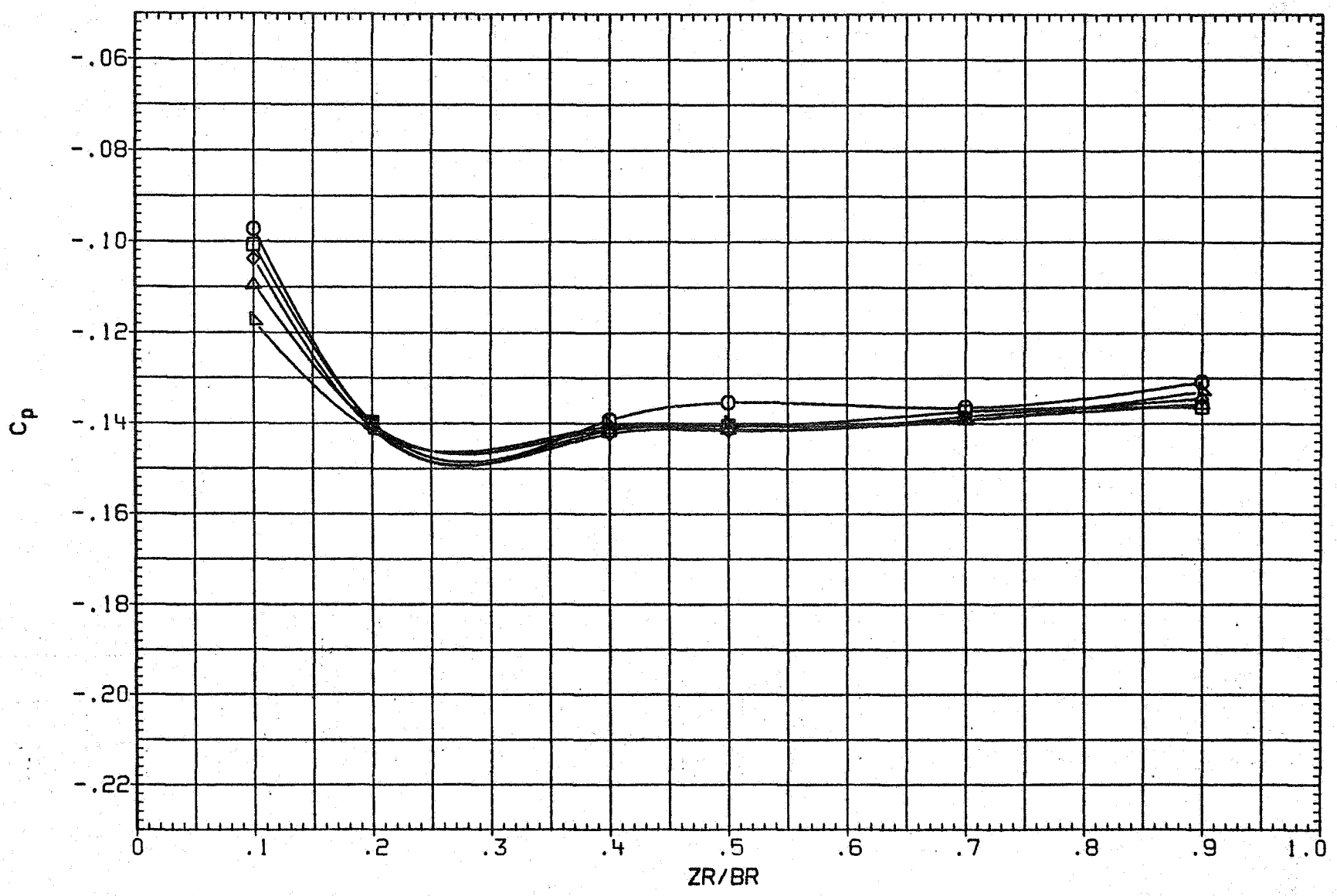

FIG 155 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HX07) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.307	.600	3.001
□	-2.116		
◇	.008		
△	2.137		
▷	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

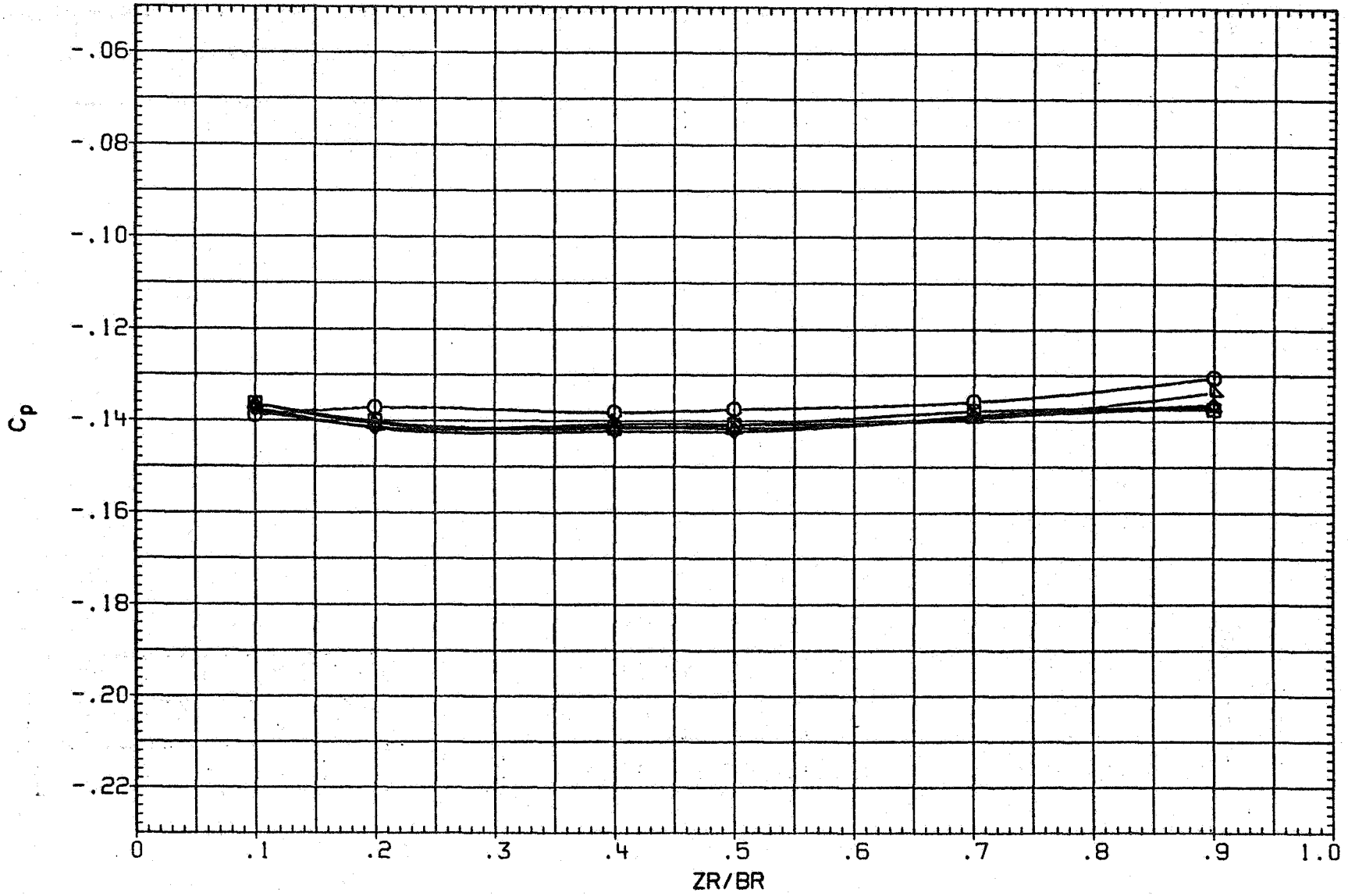

FIG 155 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HX07) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.307	1.000	3.001
□	-2.116		
◇	.008		
△	2.137		
◁	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

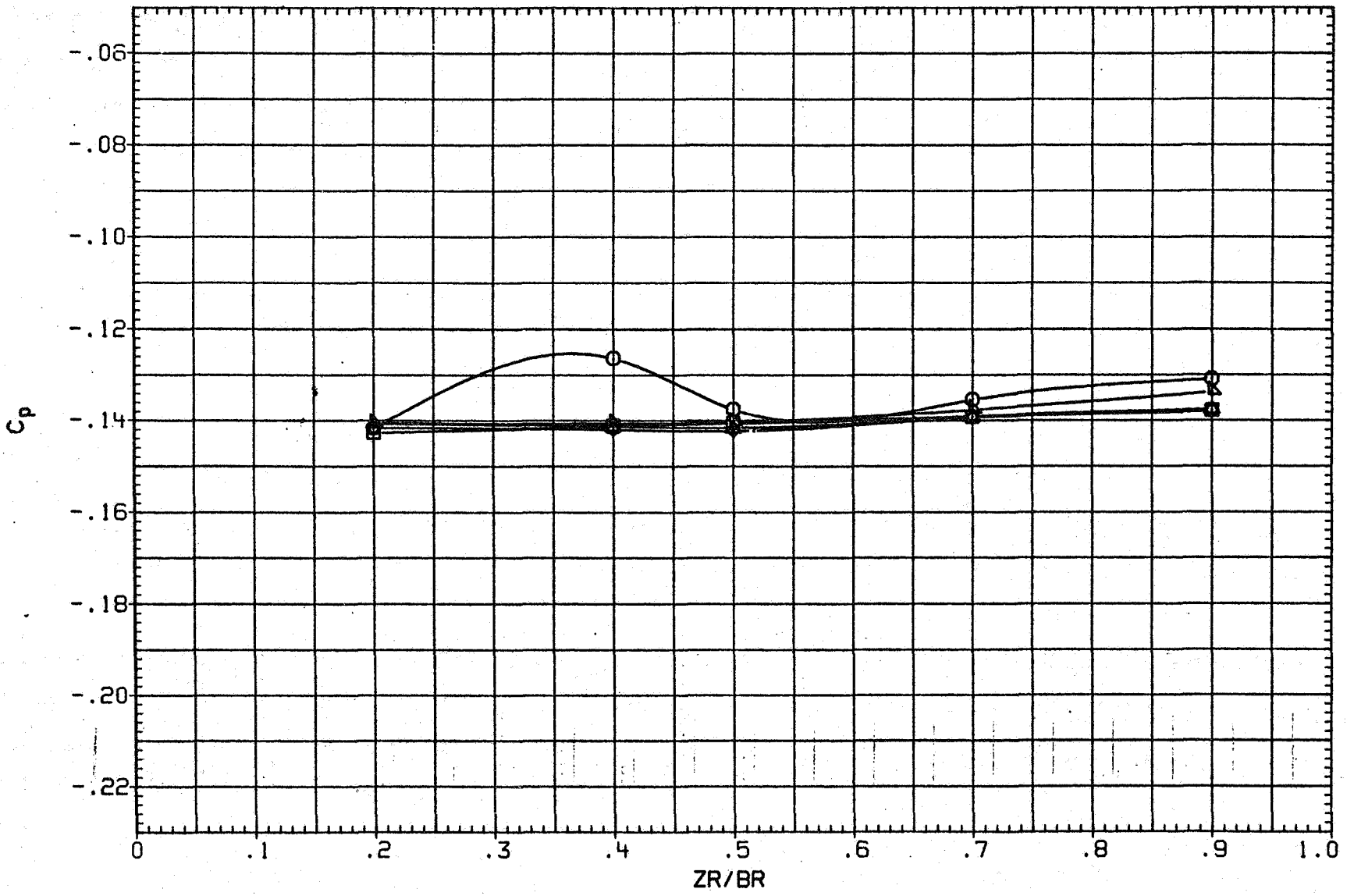

FIG 155 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HX66) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.323	.200	3.000
□	-2.123		
◇	-.009		
△	2.144		
◁	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

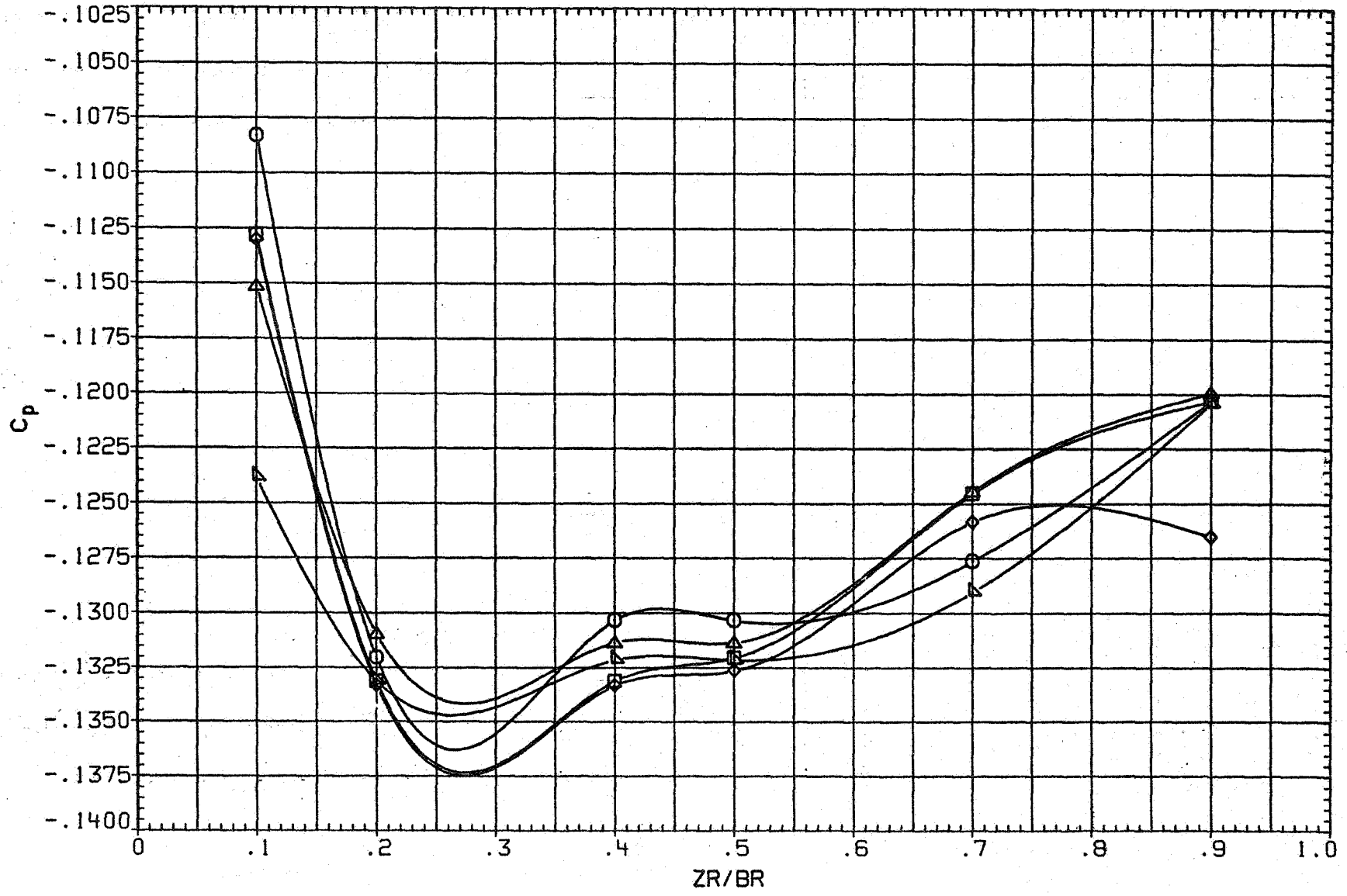

FIG 156 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HX66) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.323	.600	3.000
□	-2.123		
◇	-.009		
△	2.144		
◁	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

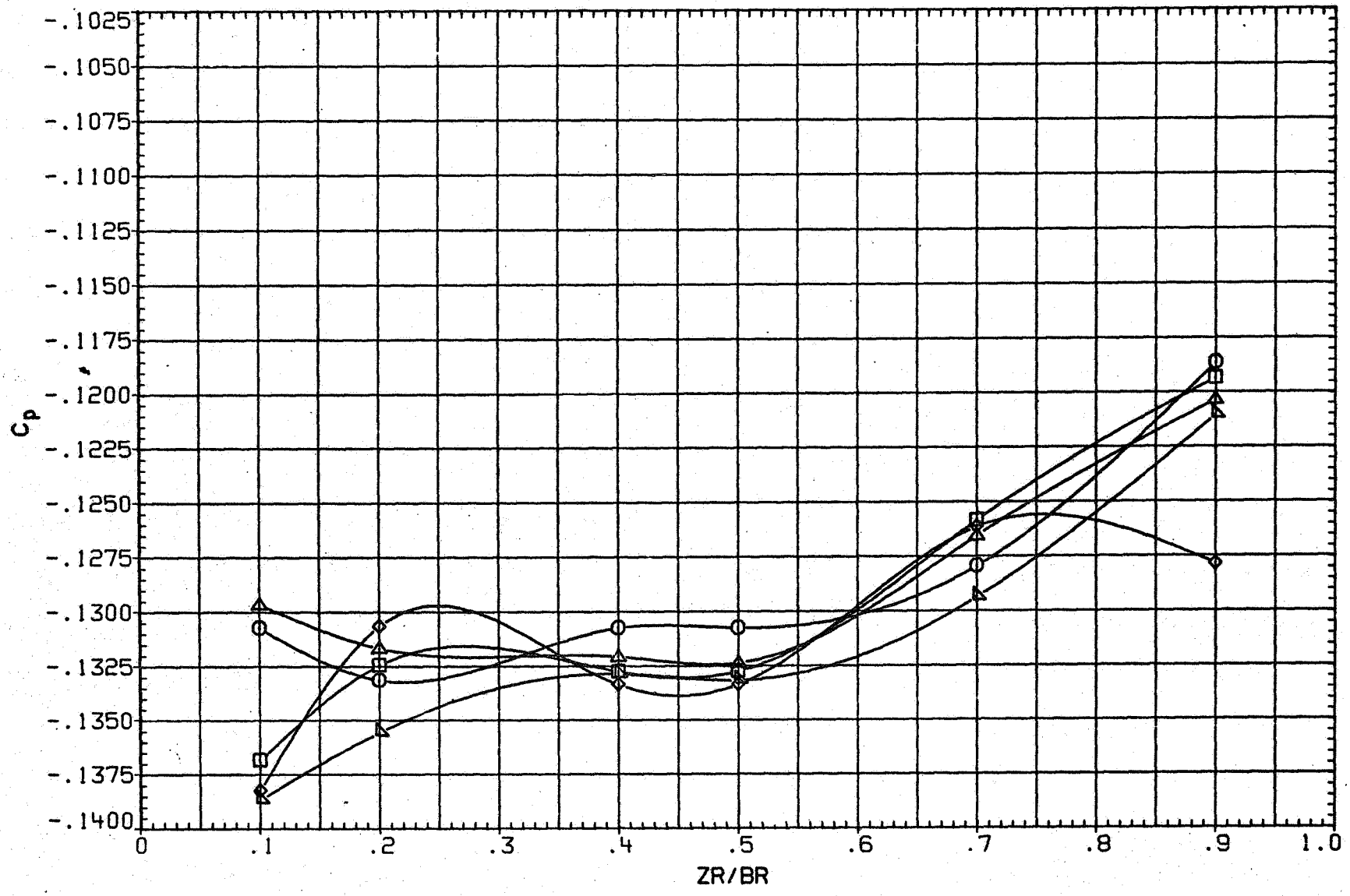

FIG 156 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HX66) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.323	1.000	3.000
□	-2.123		
◇	-.009		
△	2.144		
◁	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

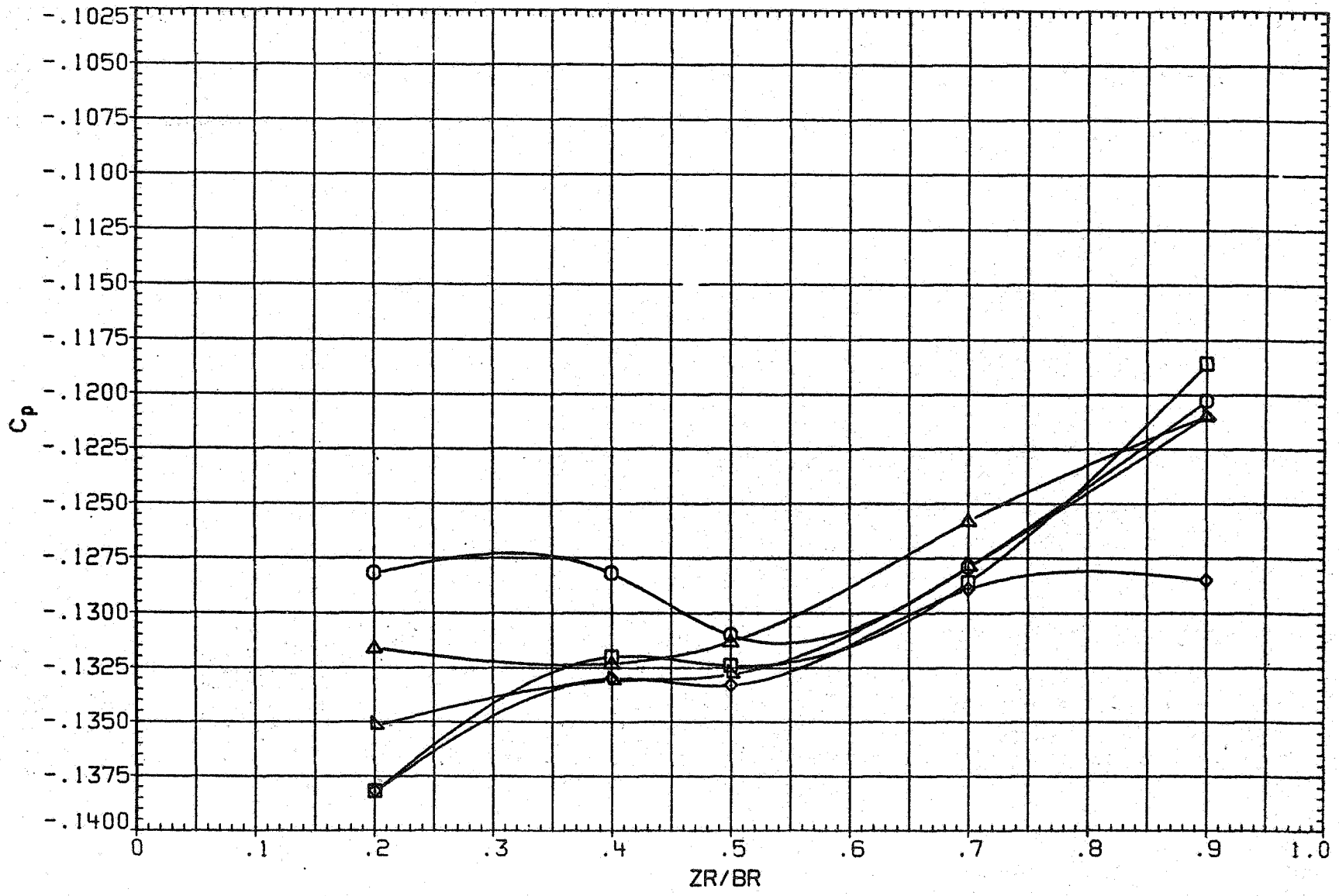

FIG 156 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HX96) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.387	.200	3.000
□	-2.179		
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

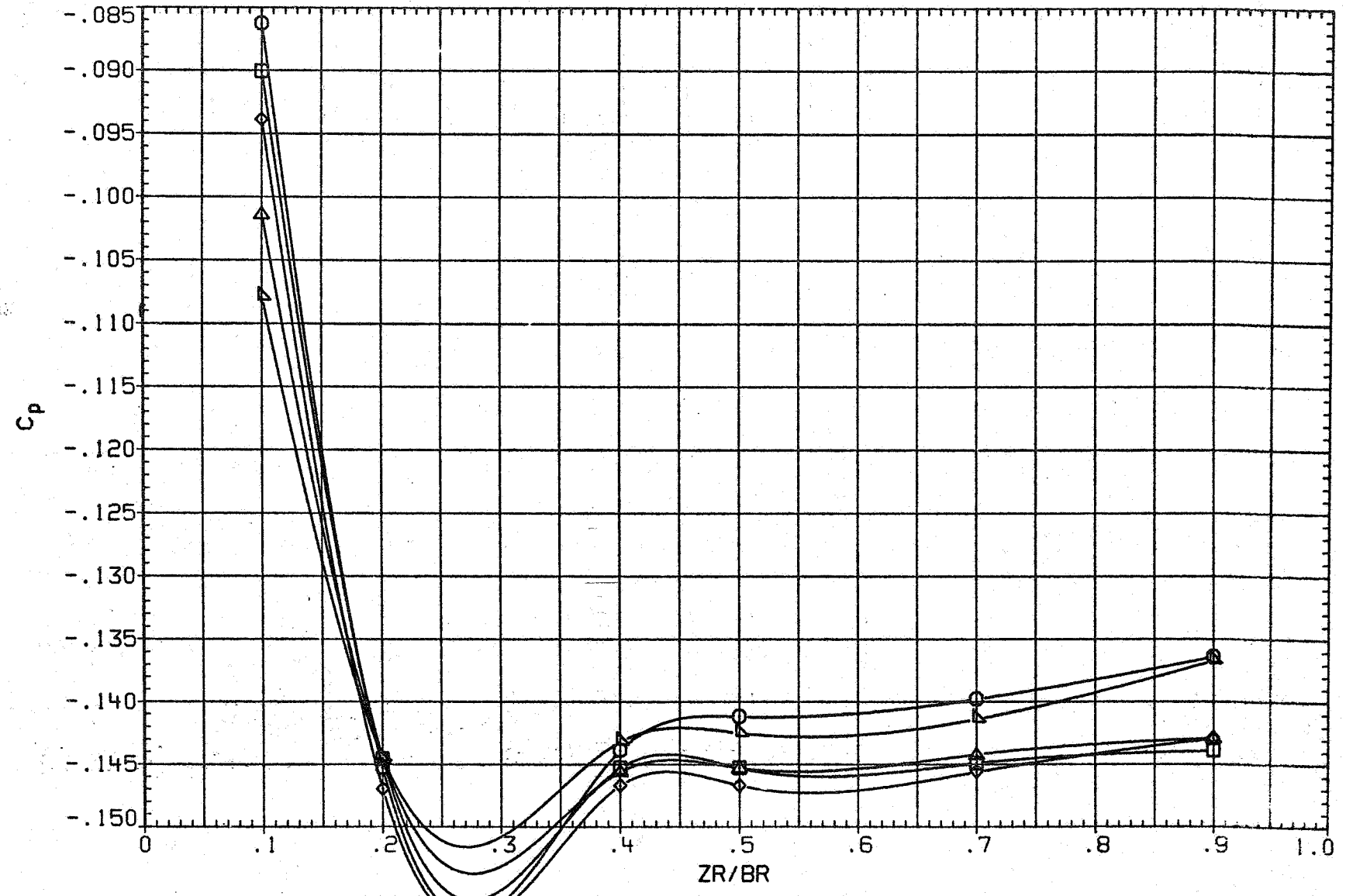

FIG 157 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HX96) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.387	.600	3.000
□	-2.179		
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

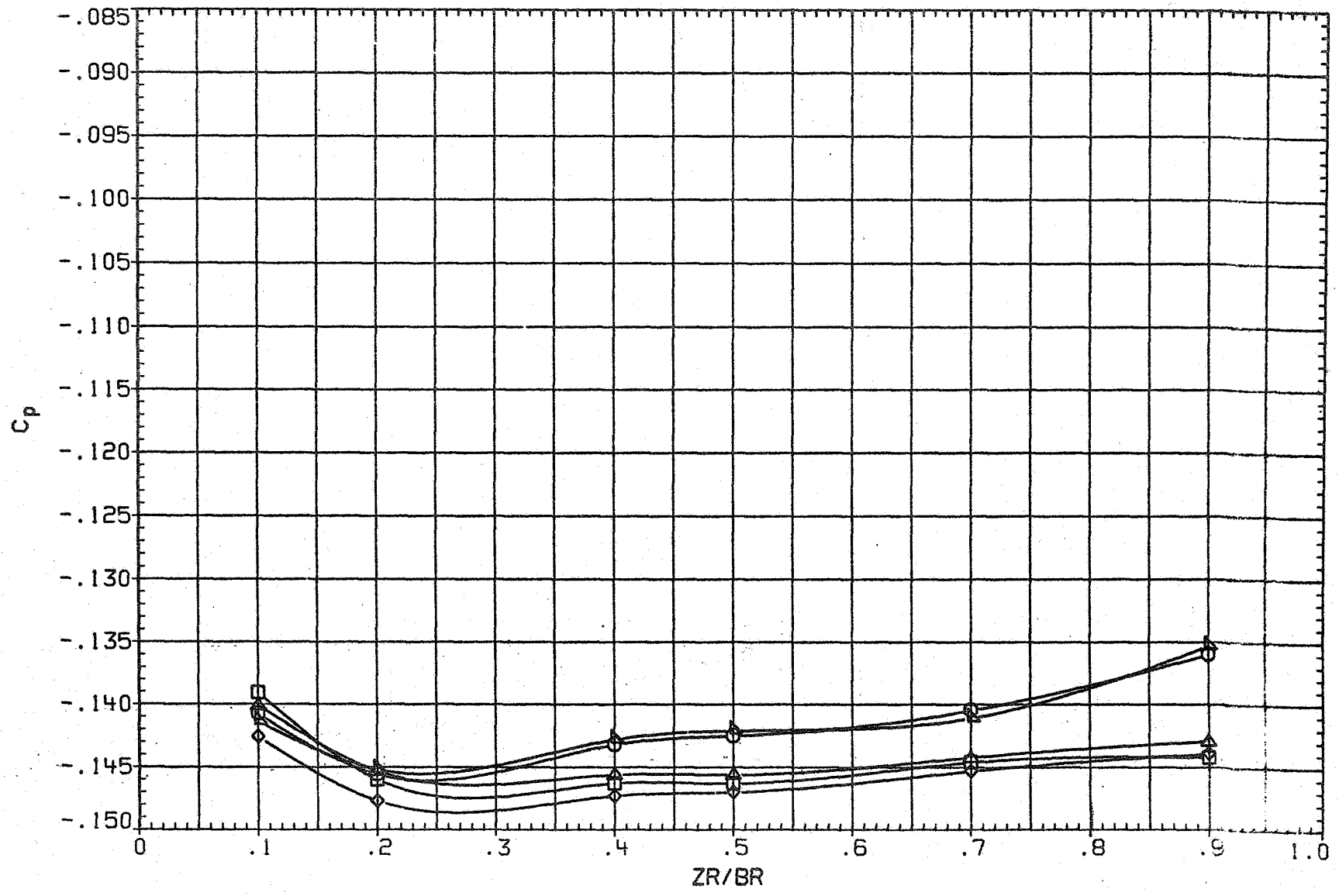

FIG 157 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HX96) AMES 118-1-11 OA145C 01 RUDDER INSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.387	1.000	3.000
□	-2.179		
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

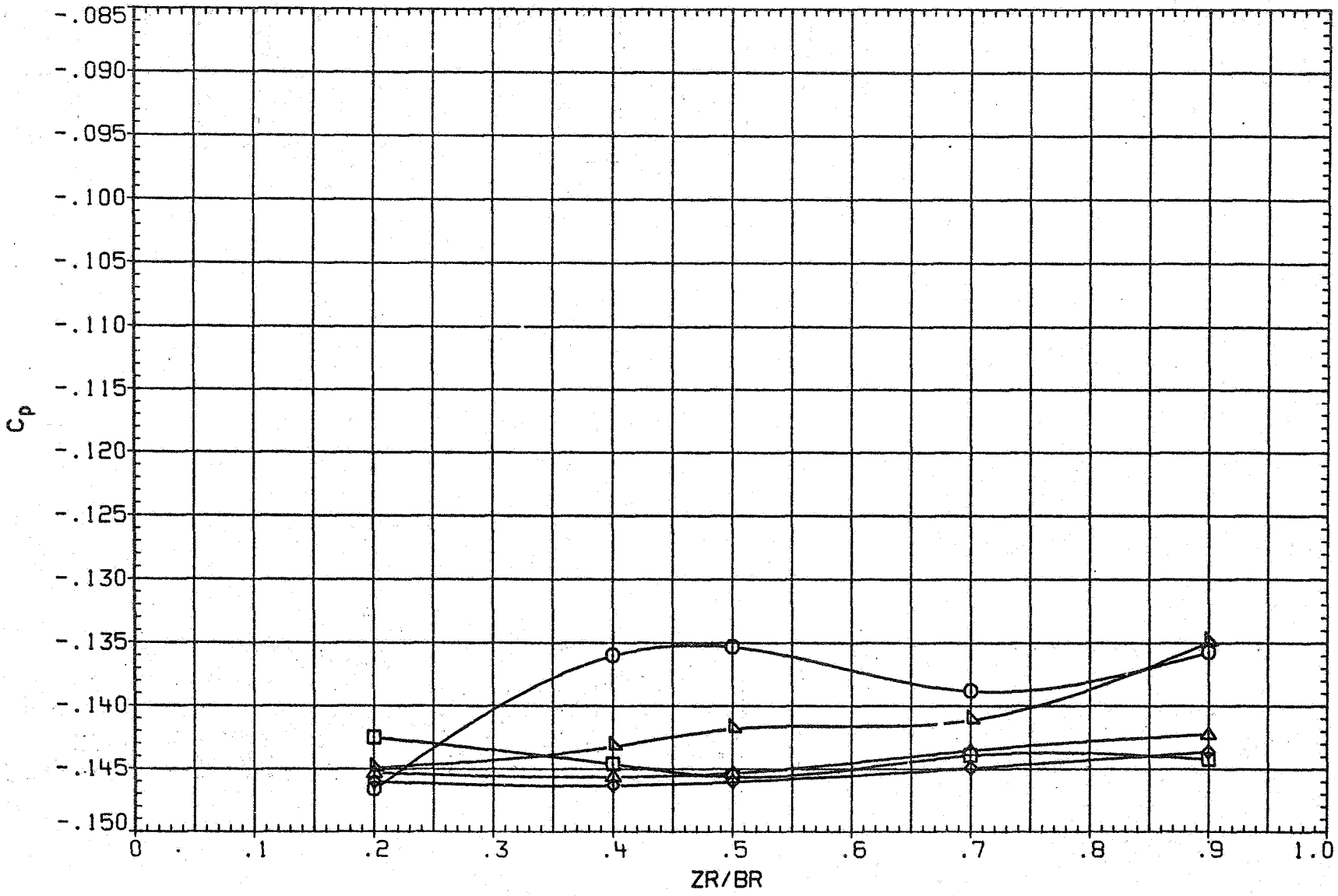

FIG 157 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, BETA EFFECT AT SPDBRK = 87.2

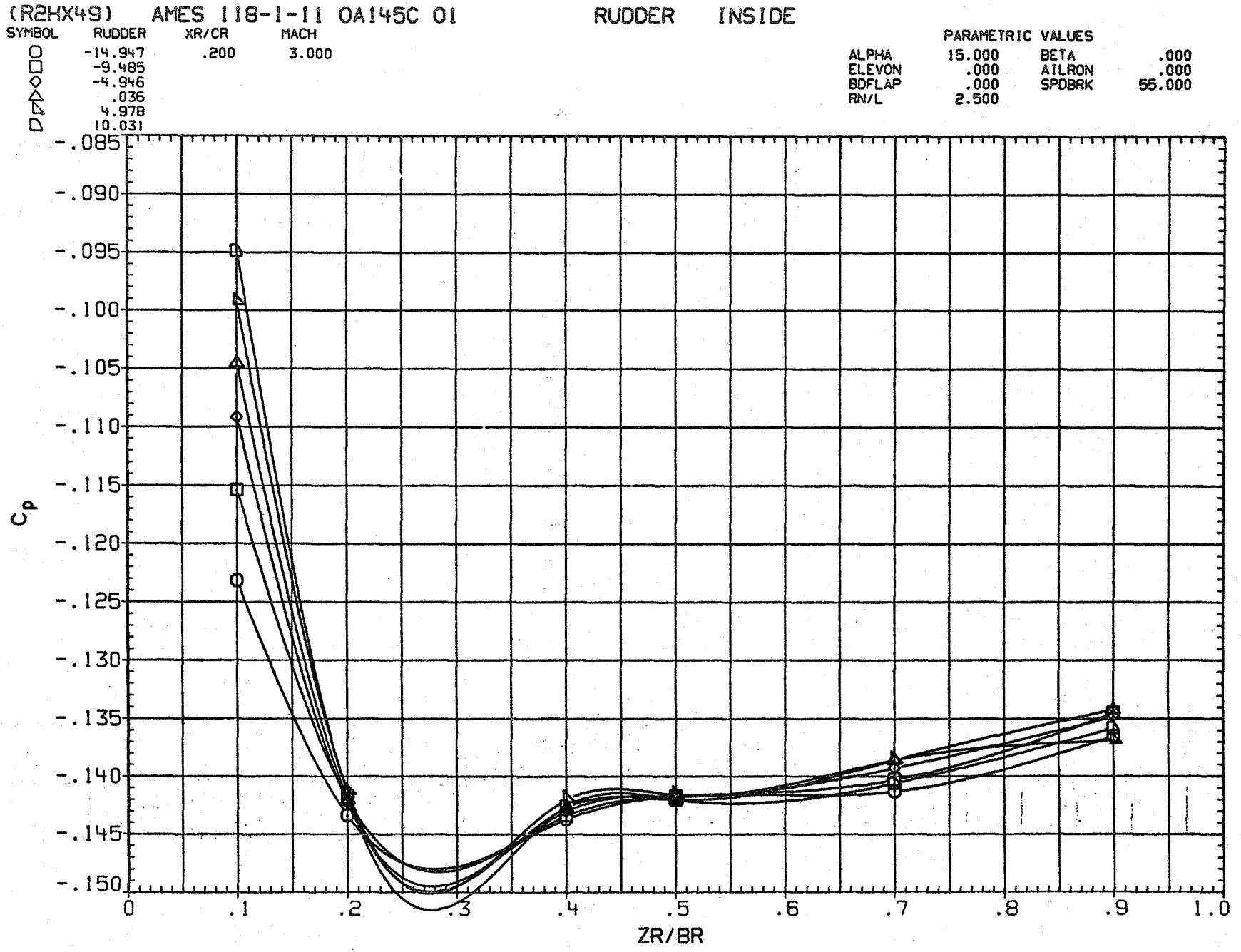

FIG 158 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 55

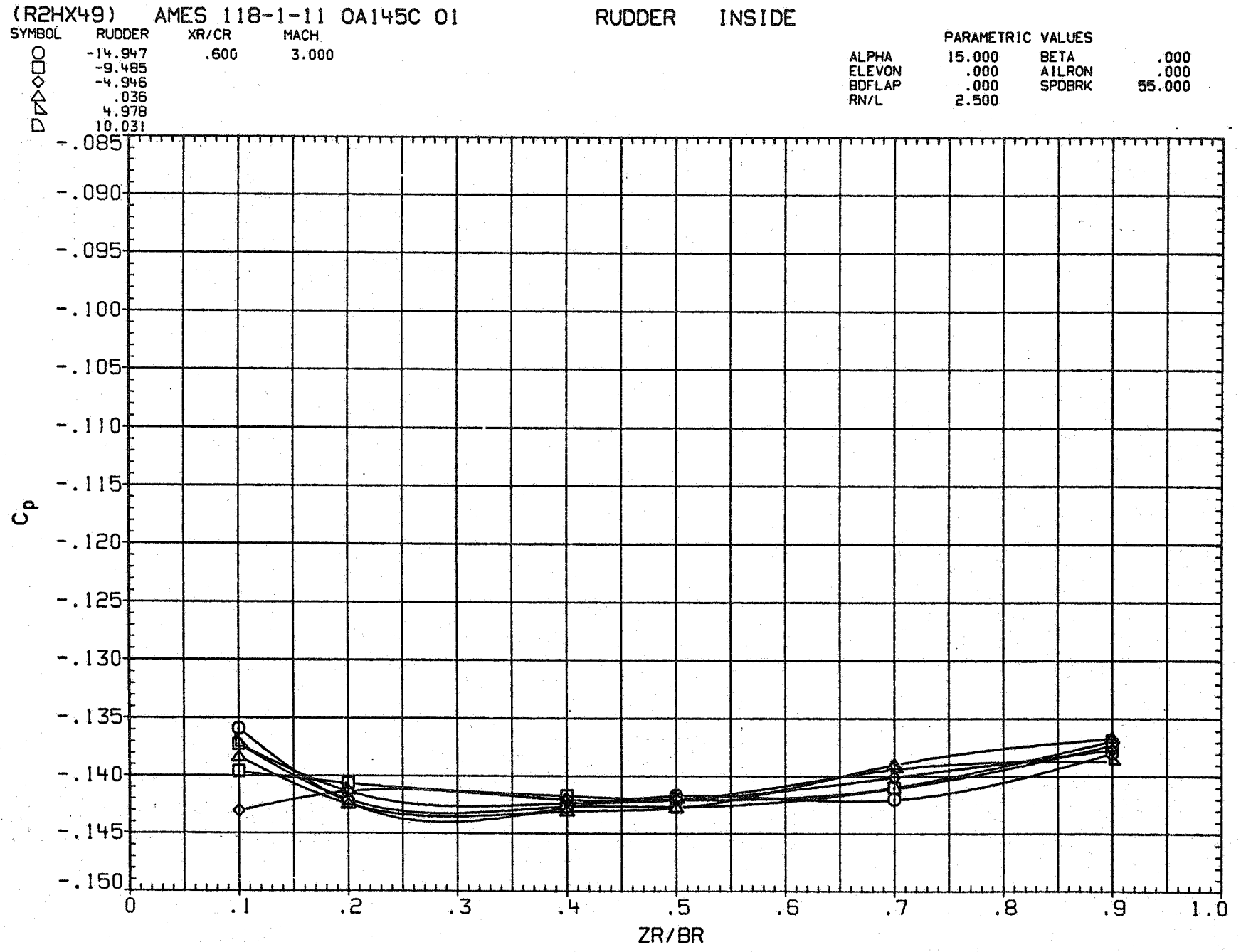

FIG 158 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HX49) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.947	1.000	3.000
□	-9.485		
◇	-4.946		
△	.036		
◁	4.978		
▷	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

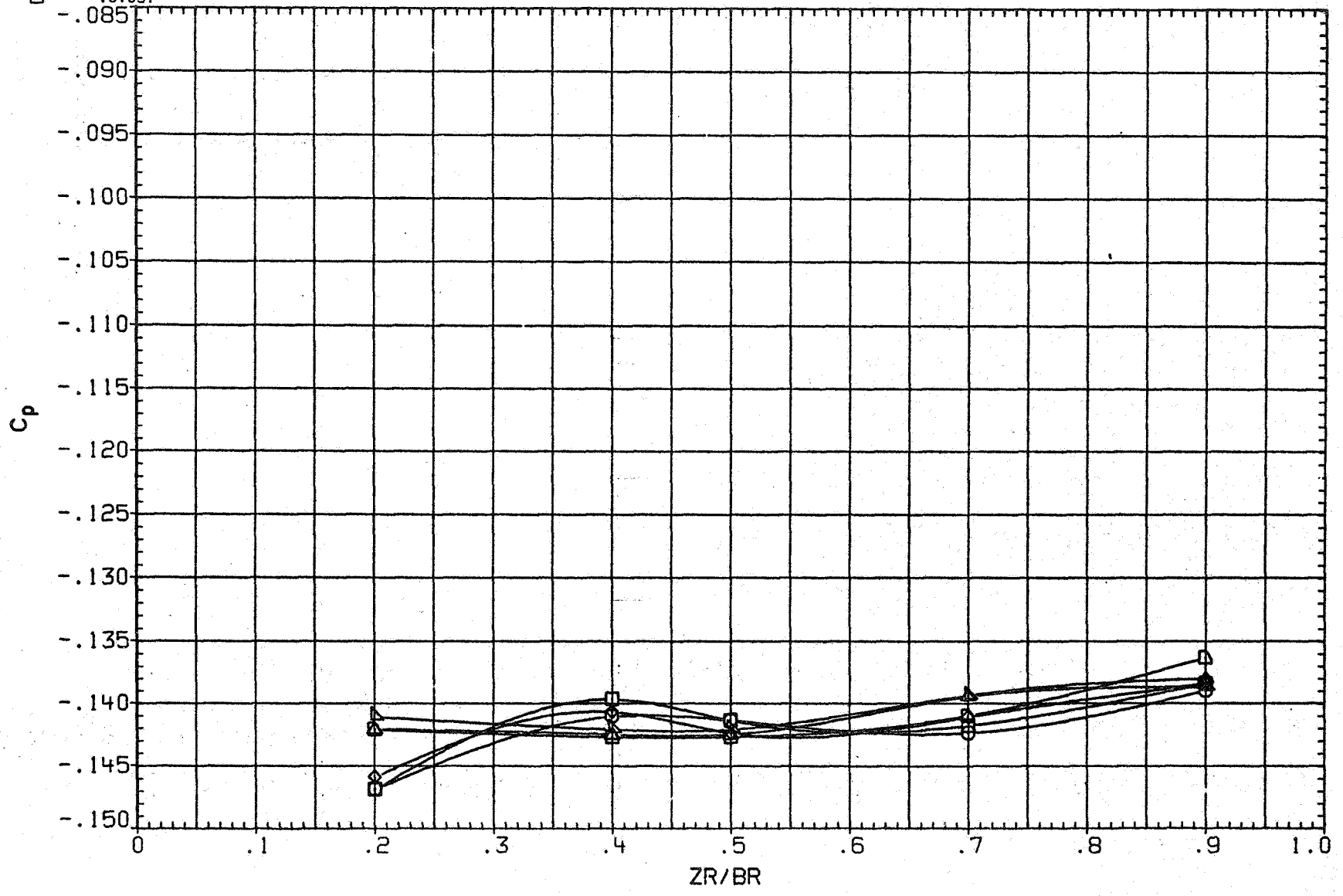

FIG 158 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 55

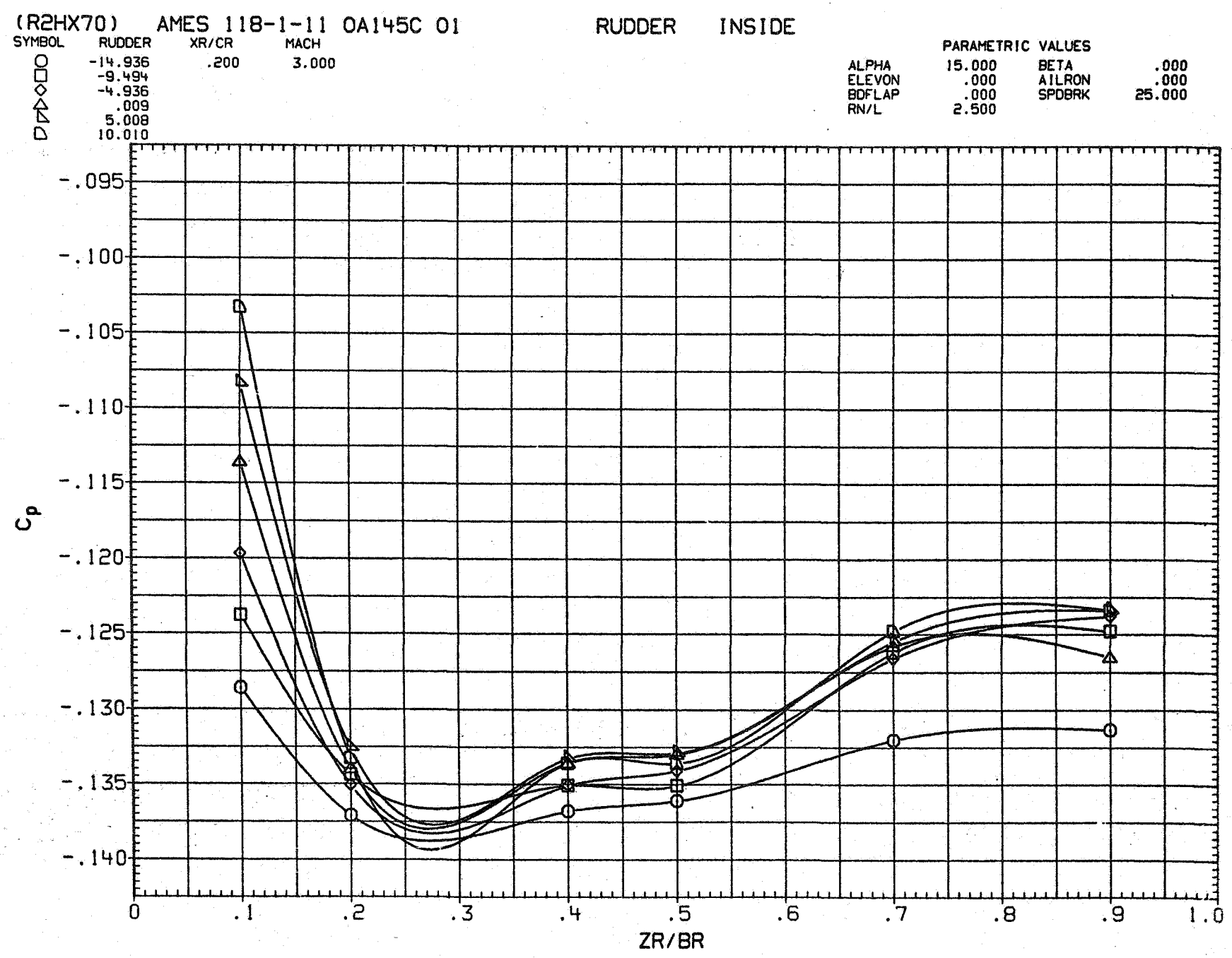

FIG 159 OA145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 25

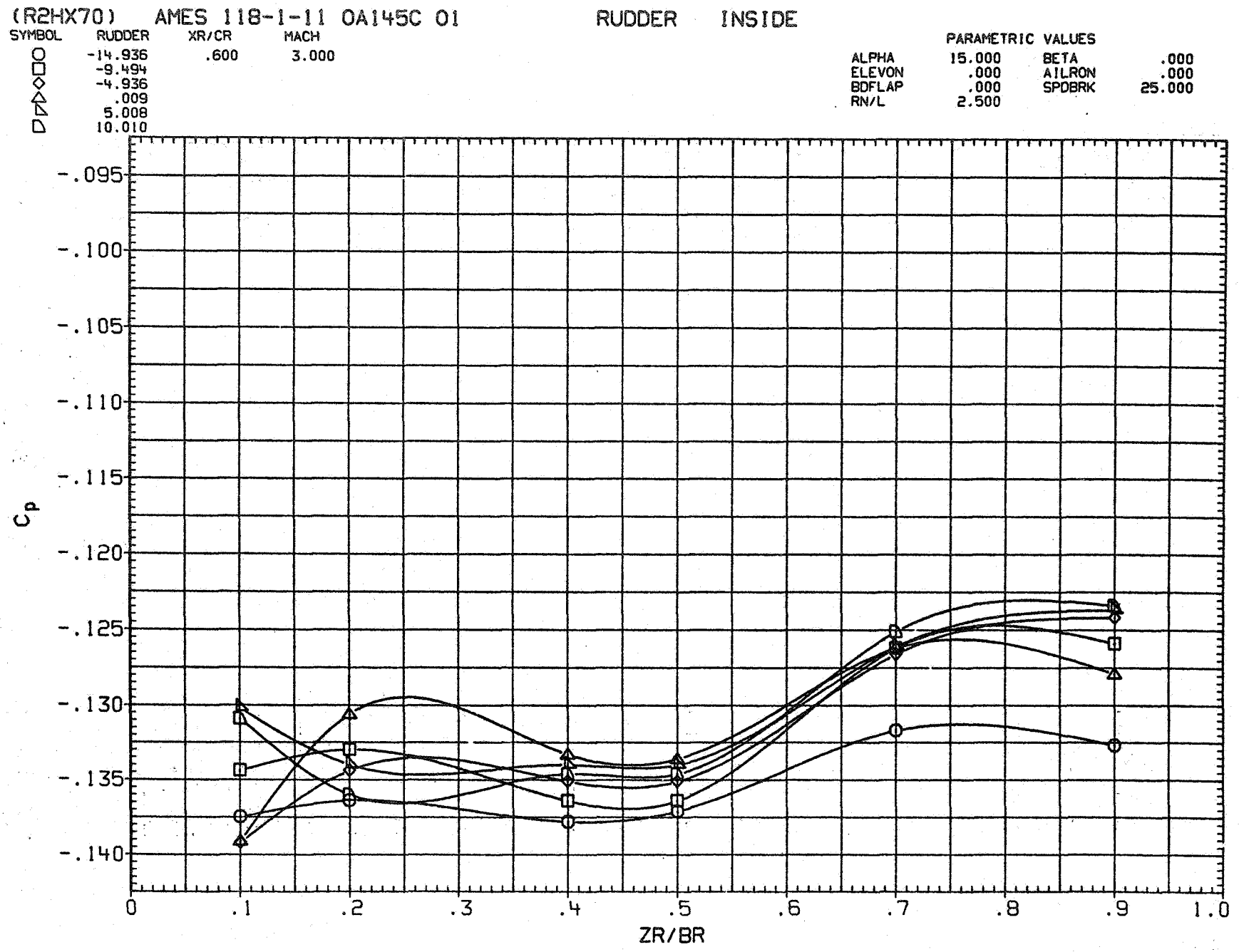

FIG 159 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 25

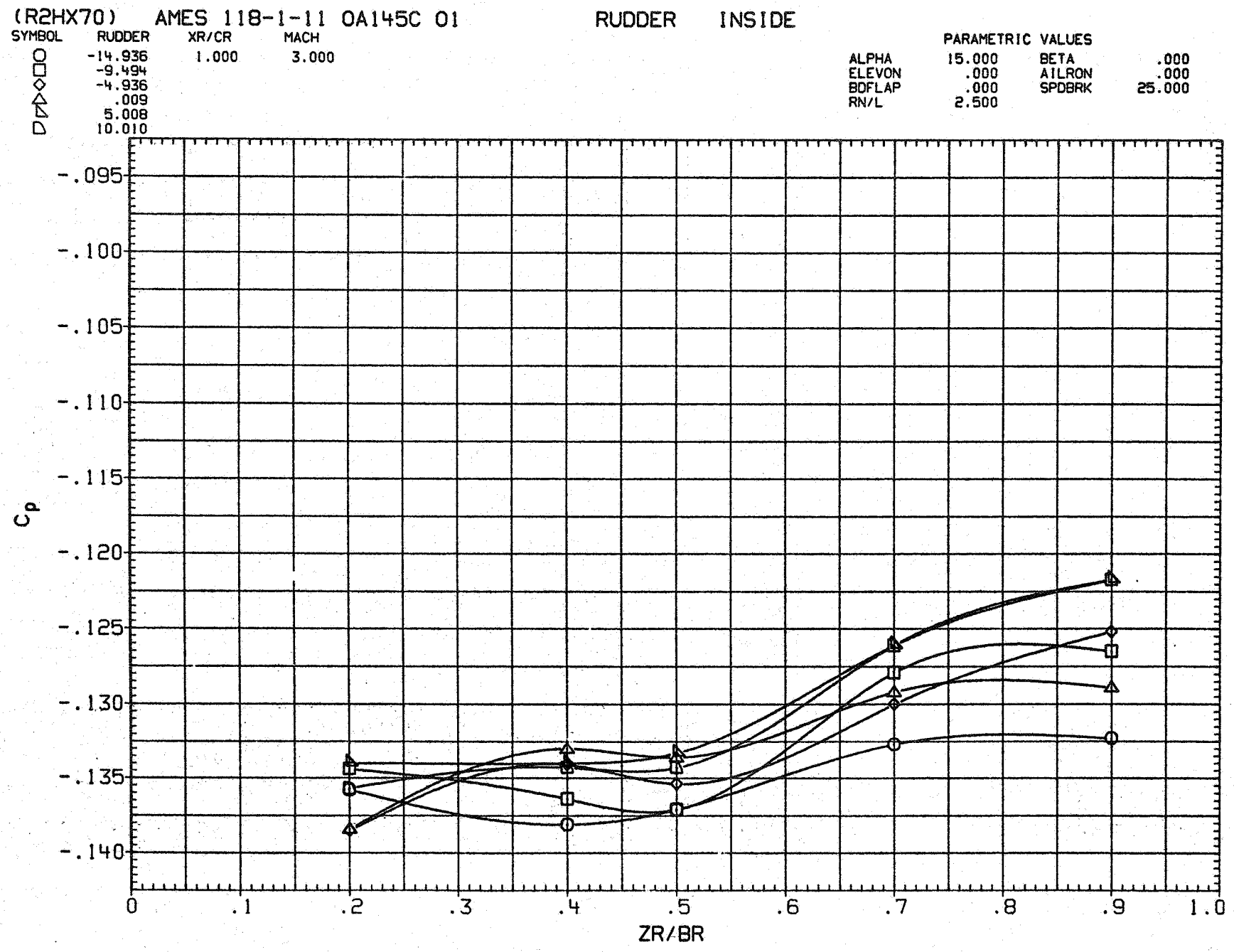

FIG 159 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 25

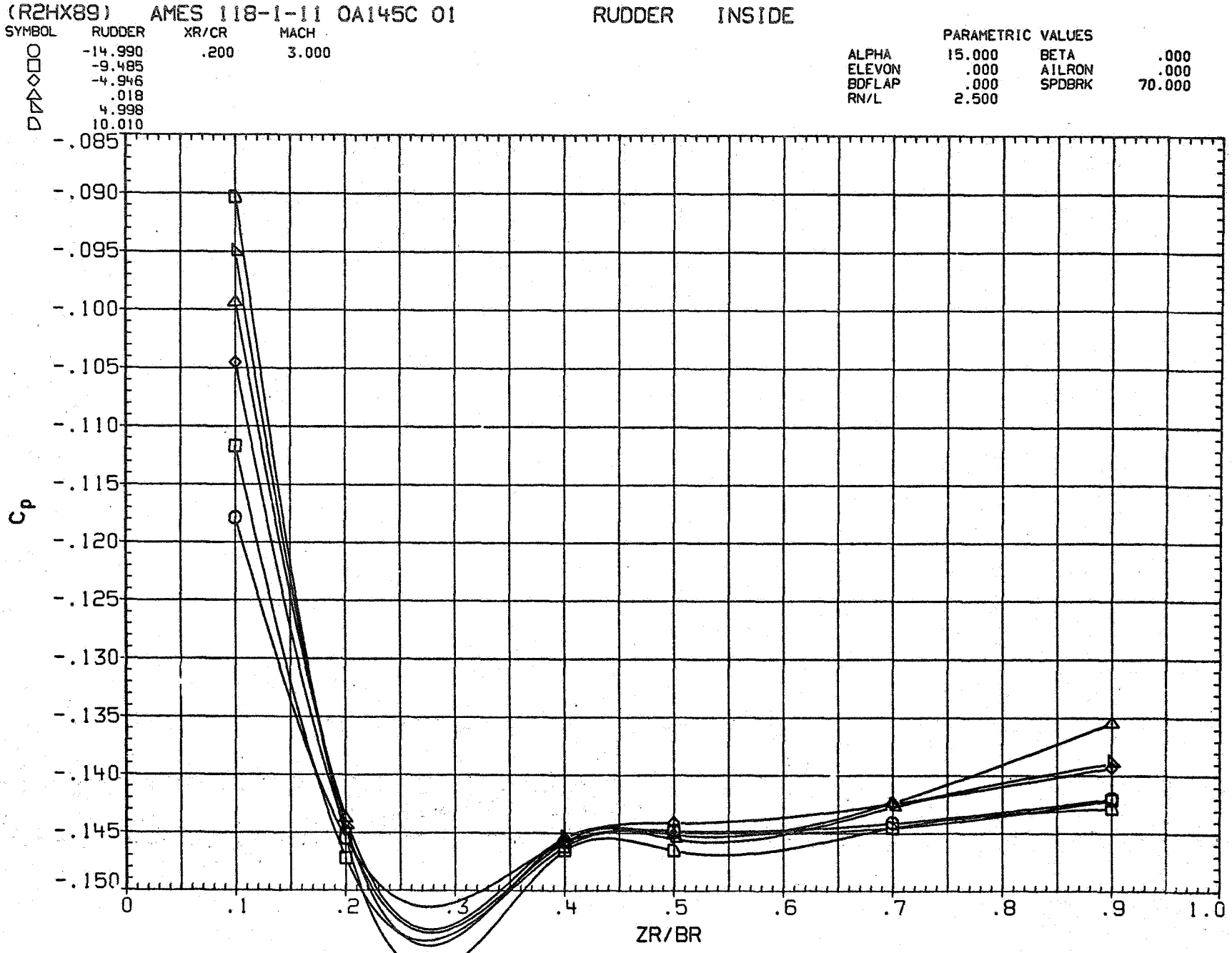

FIG 160 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HX89) AMES 118-1-11 0A145C 01 RUDDER INSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.990	.600	3.000
□	-9.485		
◇	-4.946		
△	.018		
▽	4.998		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

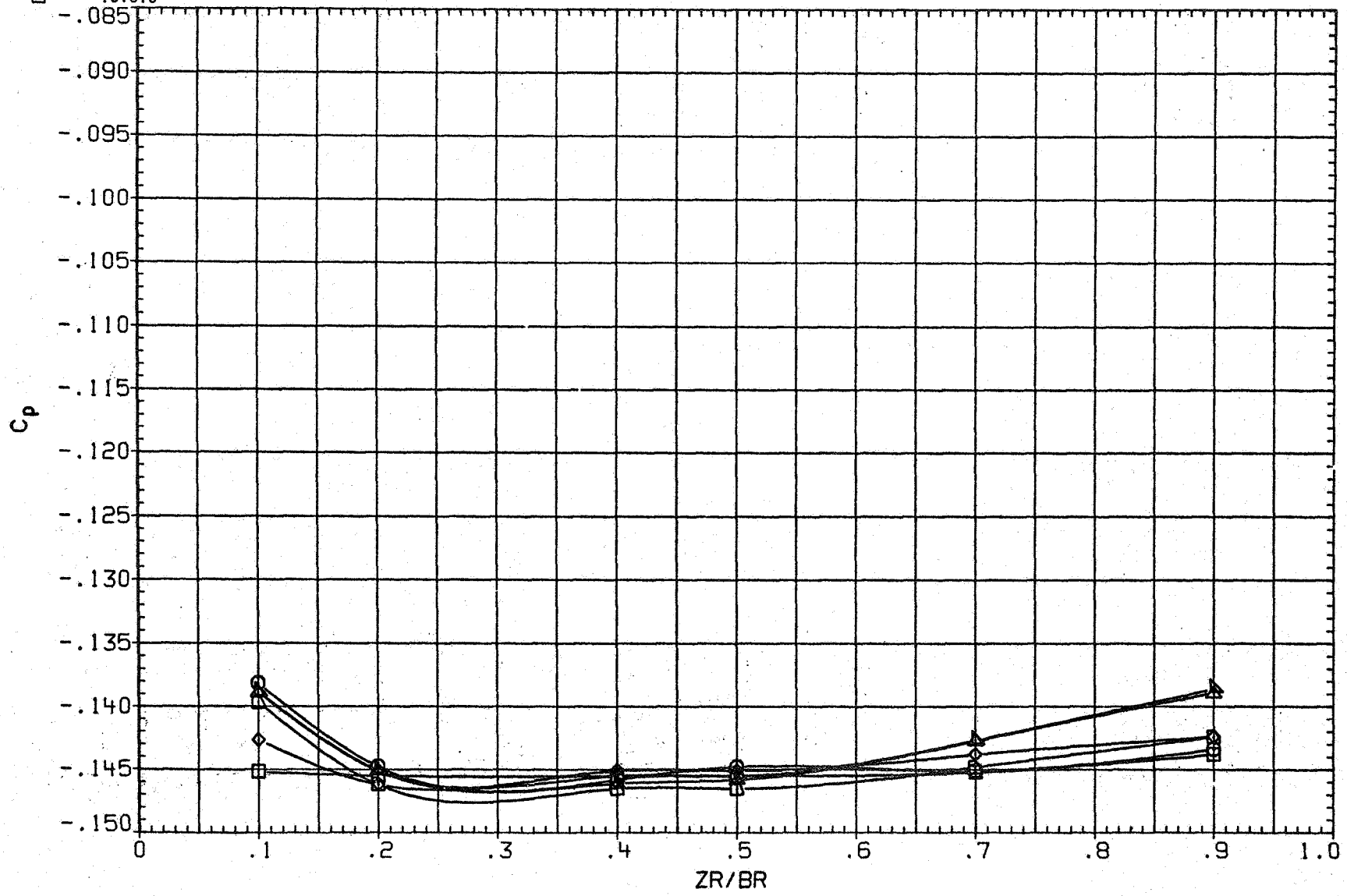

FIG 160 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 70

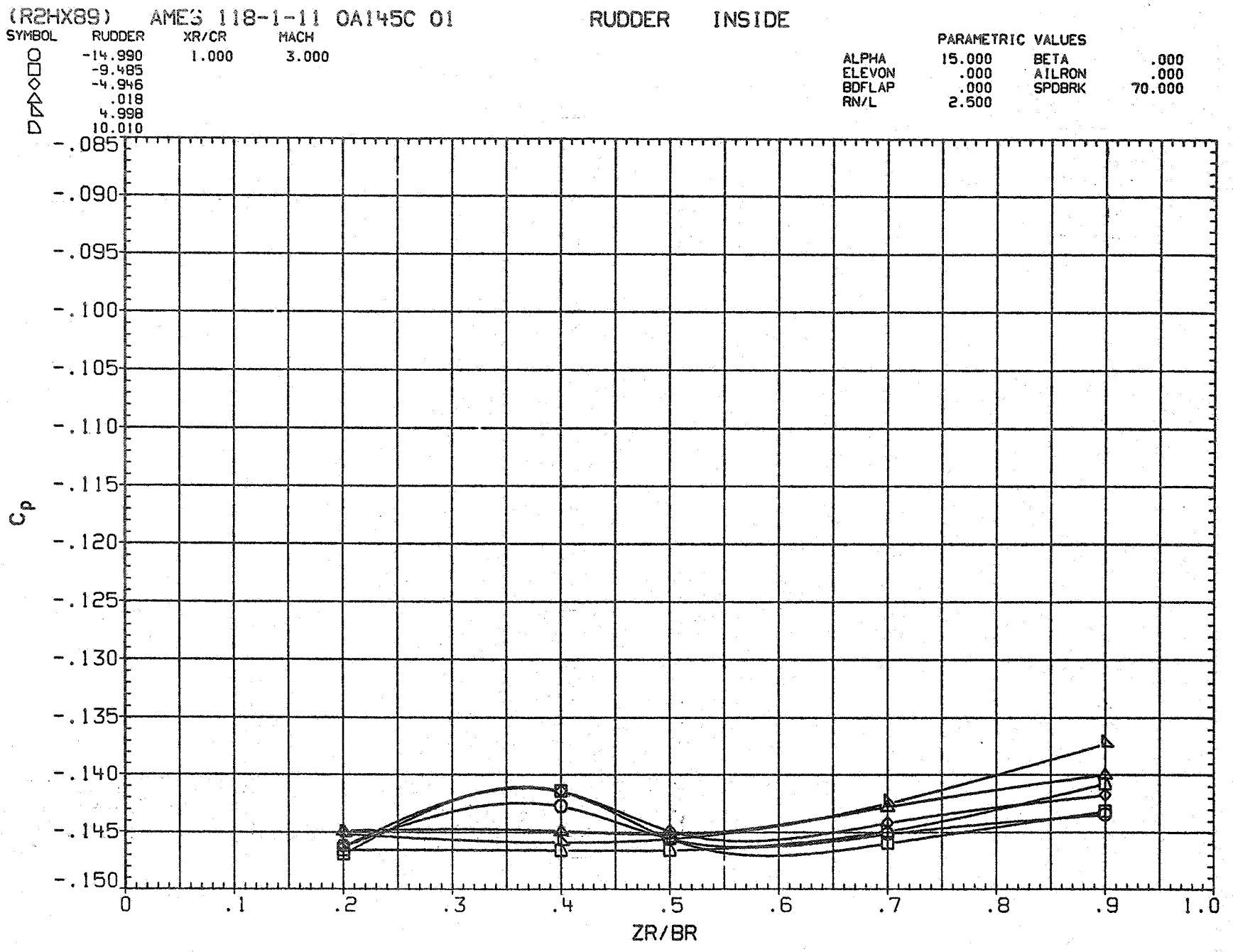

FIG 160 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 70

SYMBOL	RUDDER	XR/CR	MACH
○	-14.968	.200	3.000
□	-9.494		
◇	-4.926		
△	.018		
◁	5.028		
▷	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

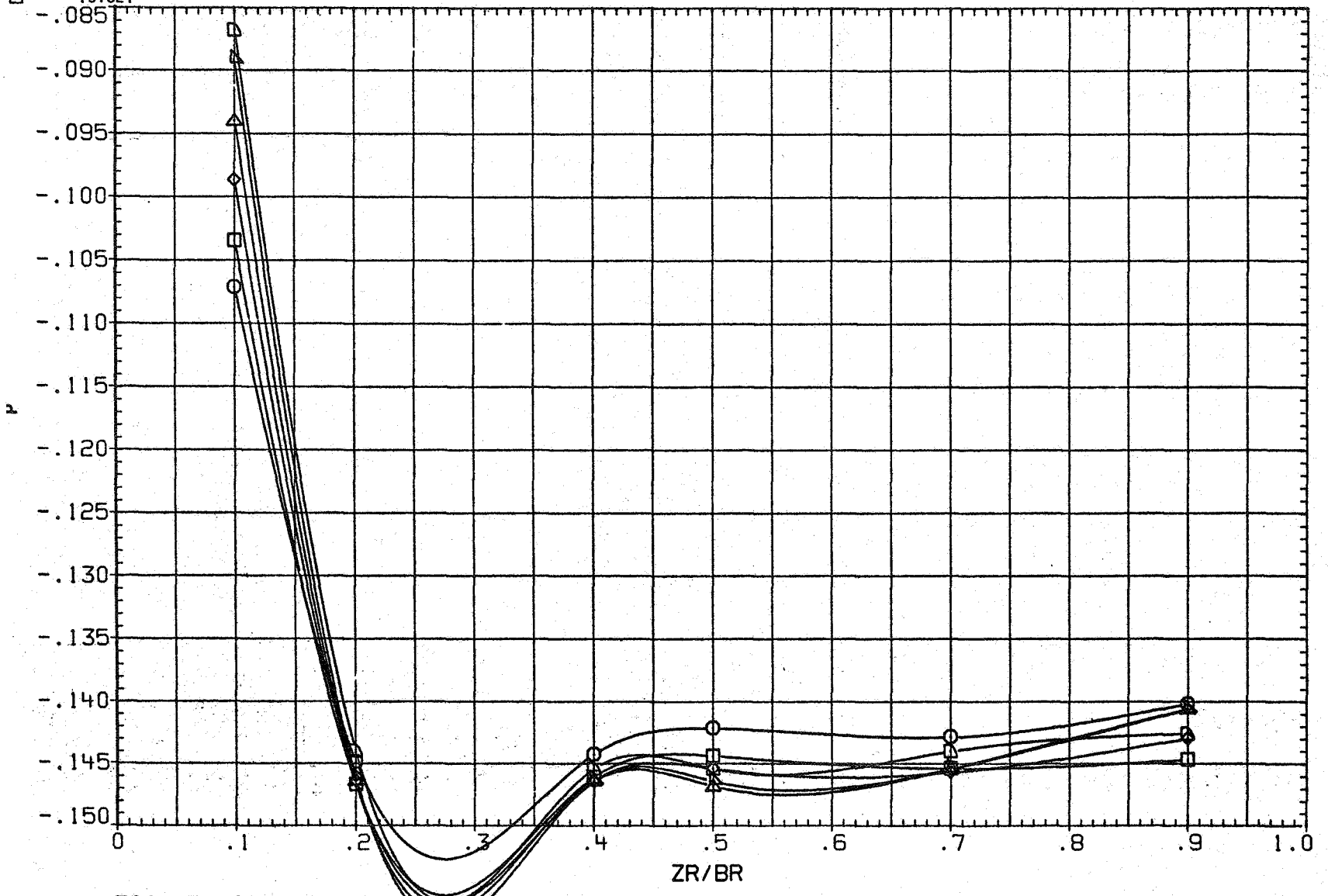

FIG 161 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

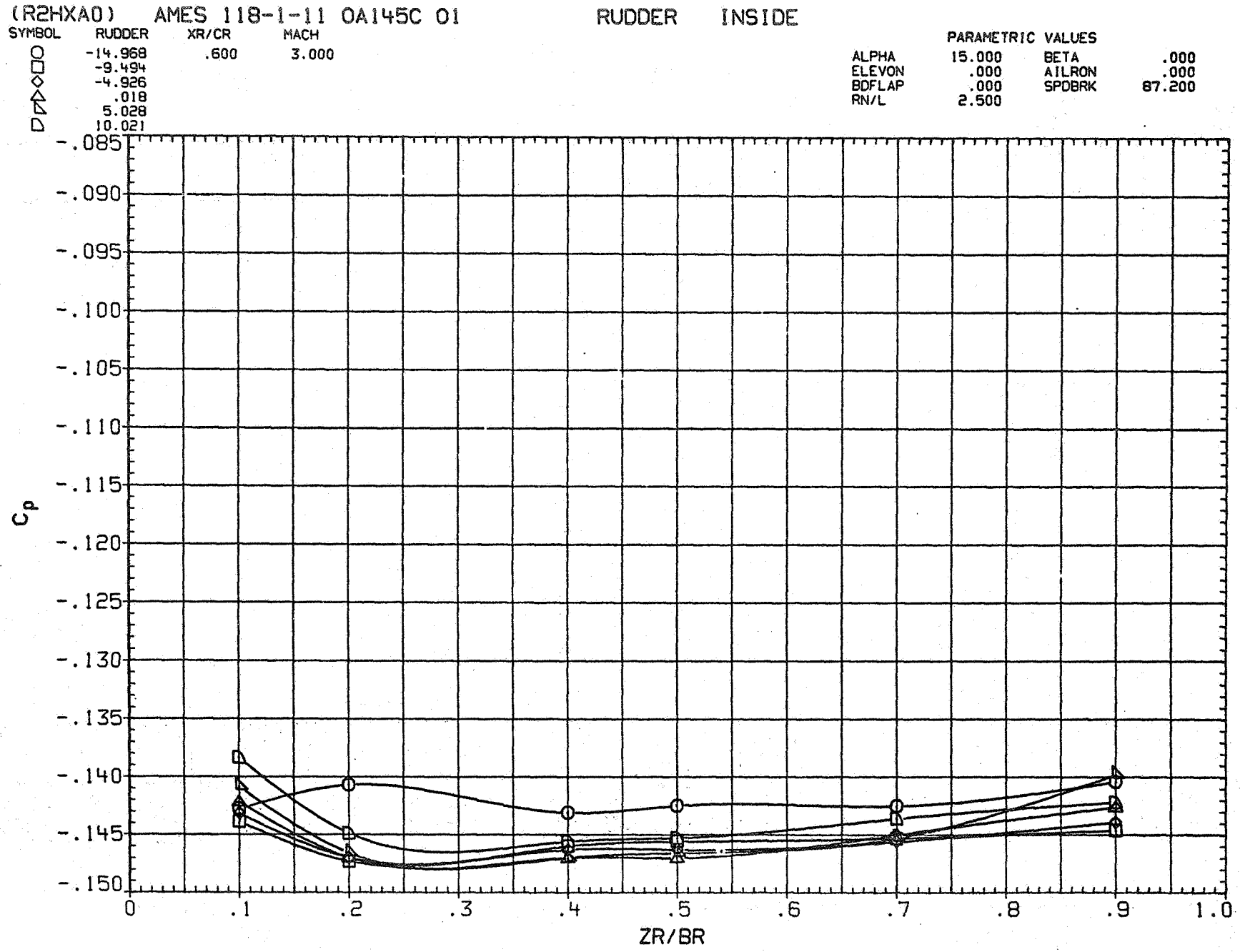

FIG 161 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

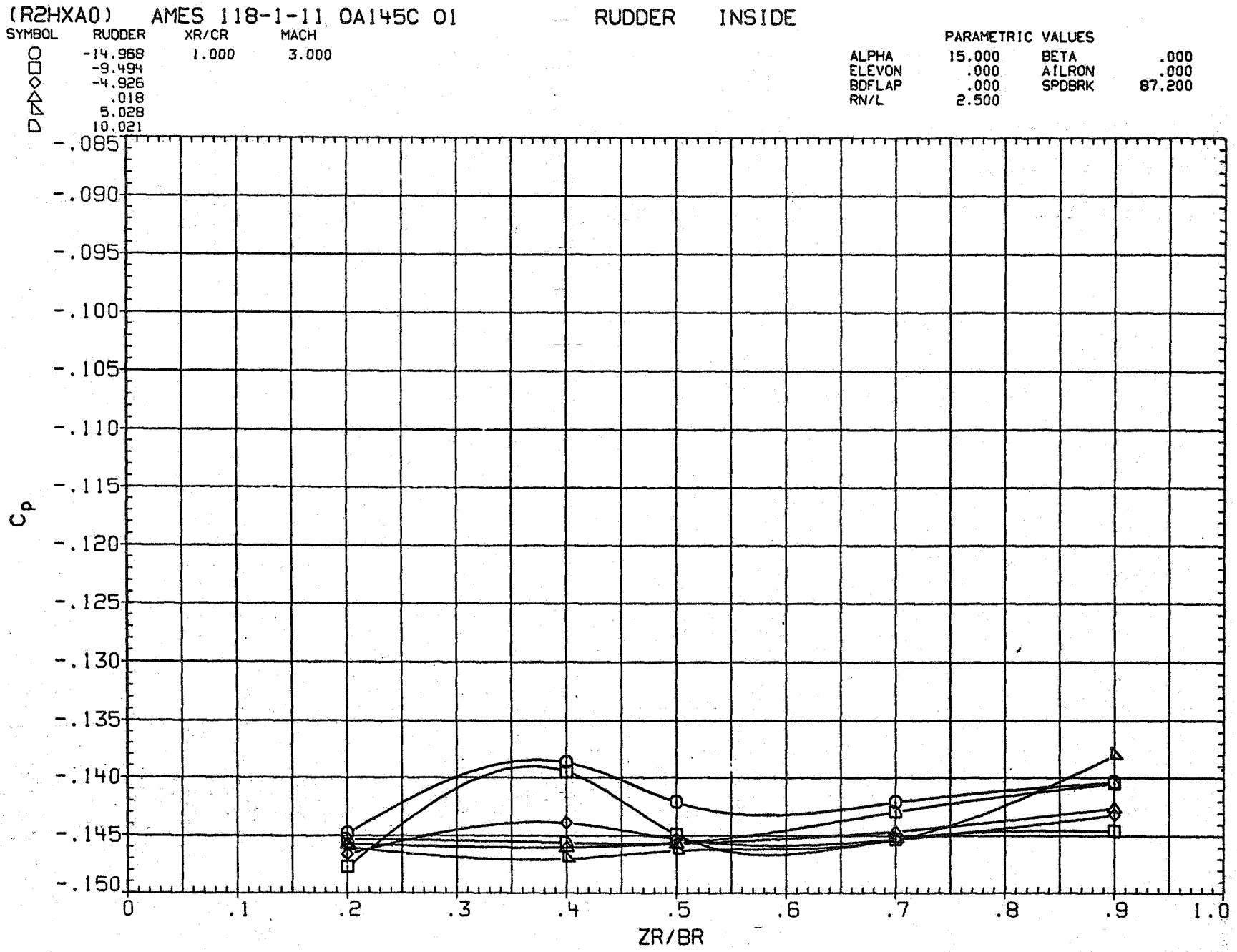

FIG 161 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HX64)	○	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	25.000		.000	2.500
(R2HX76)	□	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	40.000		.000	2.500
(R2HX02)	◇	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	55.000		.000	2.500
(R2HX85)	△	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	70.000		.000	2.500
(R2HX94)	◺	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	87.200		.000	2.500

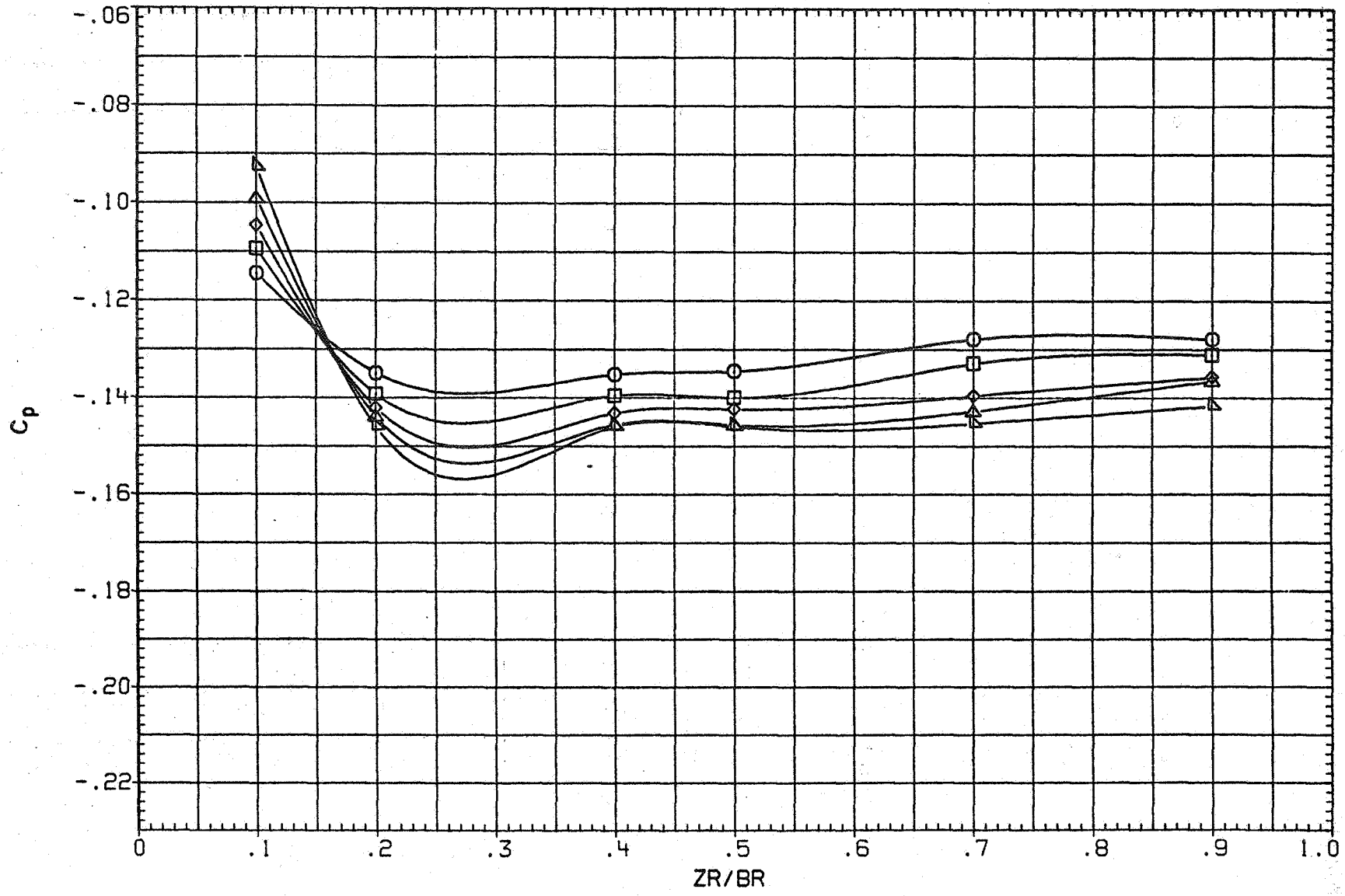

FIG 162 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 XR/CR = .200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HX64)	○	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	25.000		.000	2.500
(R2HX76)	□	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	40.000		.000	2.500
(R2HX02)	◇	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	55.000		.000	2.500
(R2HX85)	△	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	70.000		.000	2.500
(R2HX94)	▷	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	87.200		.000	2.500

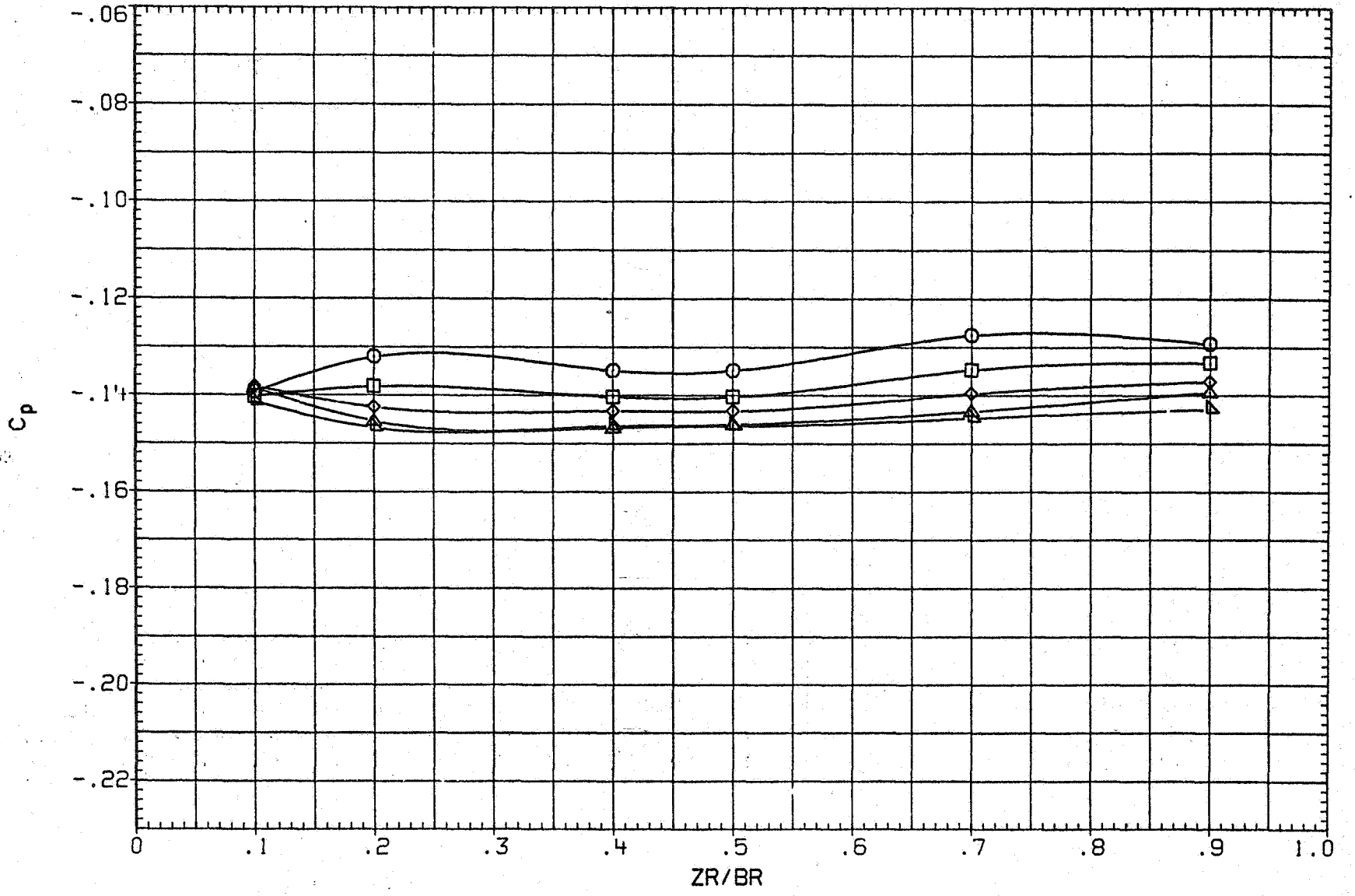

FIG 162 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 XR/CR = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HX64)	○	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	25.000		.000	2.500
(R2HX76)	□	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	40.000		.000	2.500
(R2HX02)	◇	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	55.000		.000	2.500
(R2HX85)	△	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	70.000		.000	2.500
(R2HX94)	▽	AMES 118-1-11 0A145C 01	RUDDER	INSIDE	87.200		.000	2.500

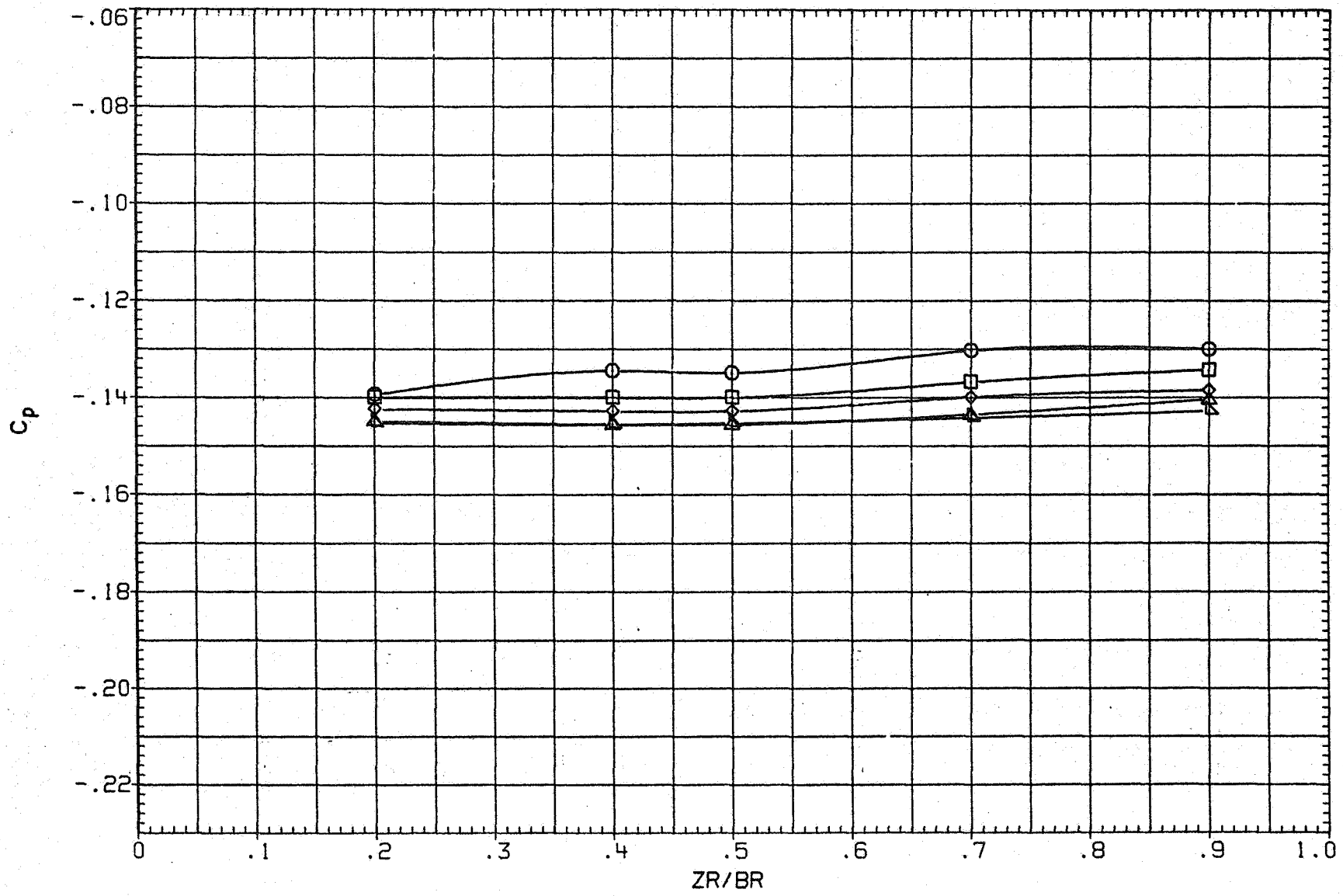

FIG 162 0A145C SPEED BRAKE CP VS. ZR/BR
INNER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 XR/CR = 1.000

(R2HW02) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.182	-.200	3.001
□	5.887		
◇	9.949		
△	15.195		
▷	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

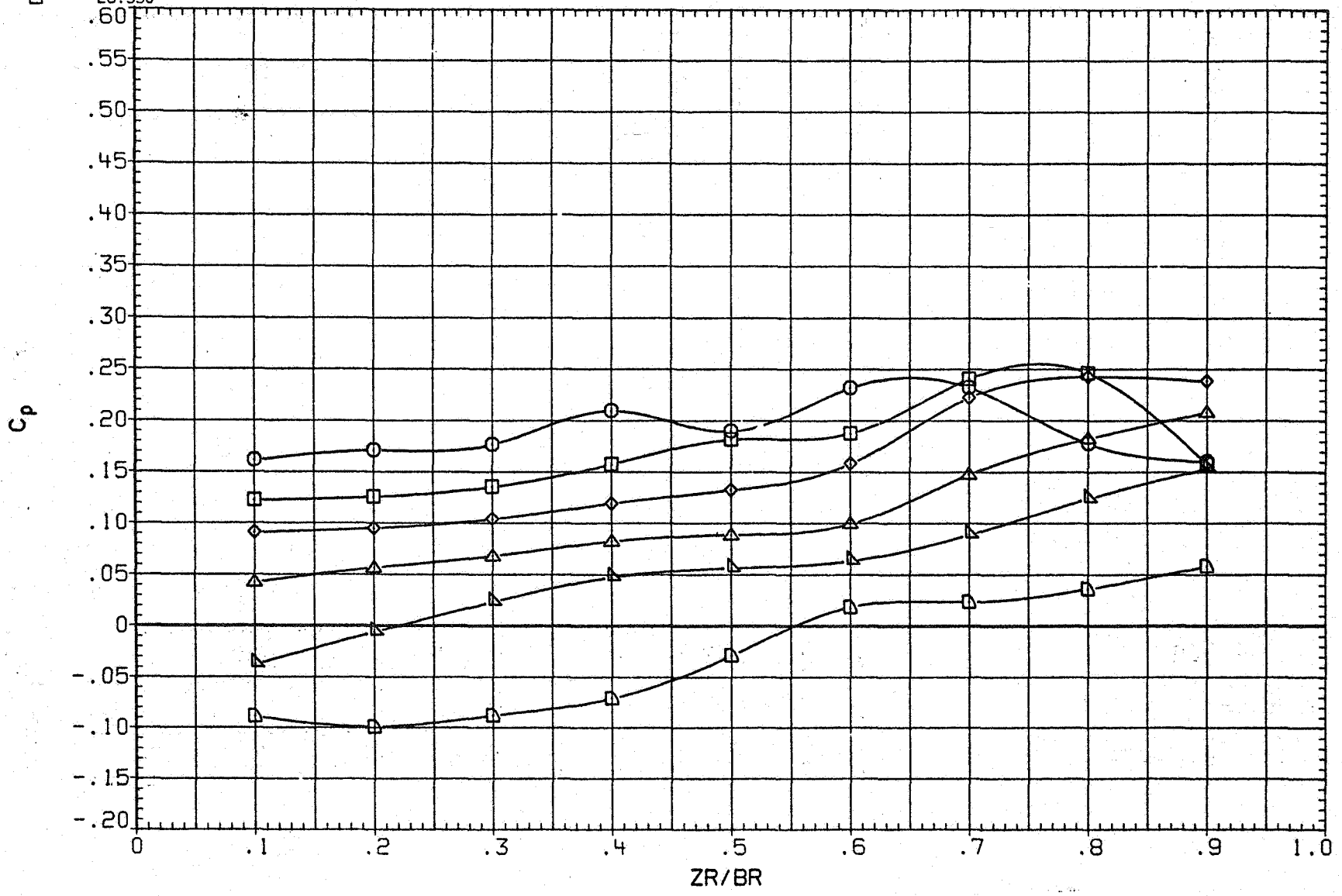

FIG 163 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW02) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.182	.200	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

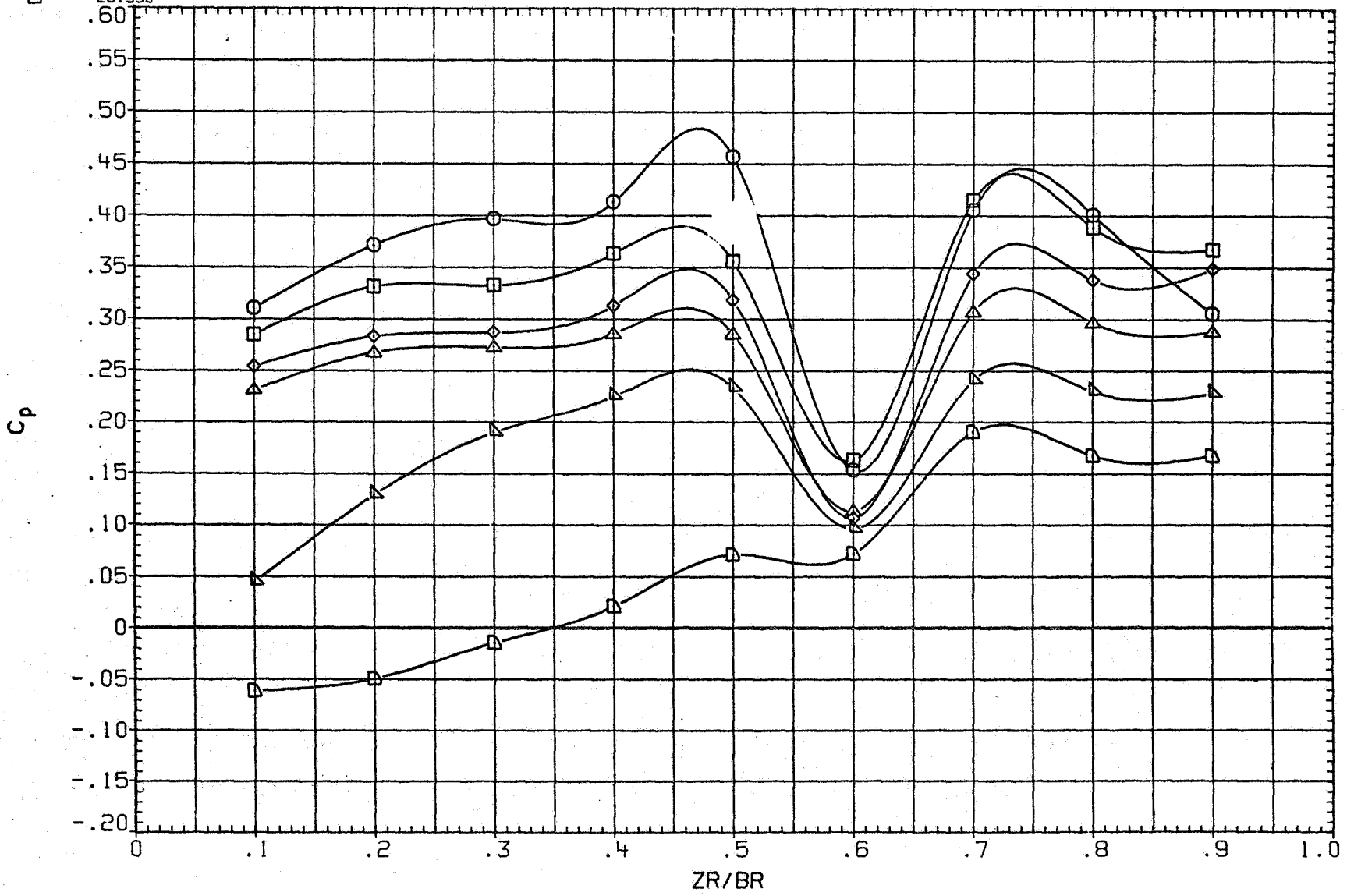

FIG 163 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

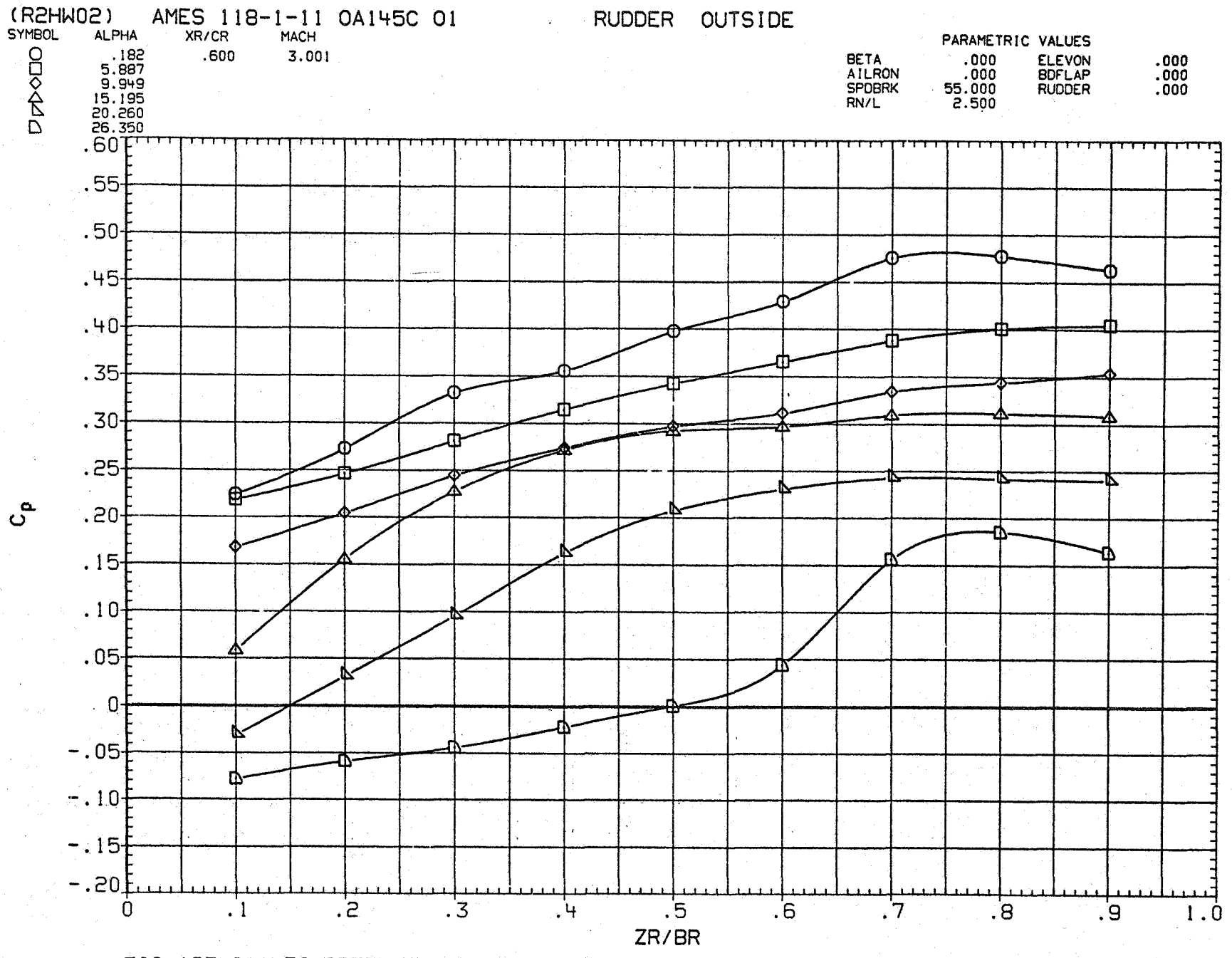

FIG 163 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

(R2HW02) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.182	1.000	3.001
□	5.887		
◇	9.949		
△	15.195		
◁	20.260		
▷	26.350		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

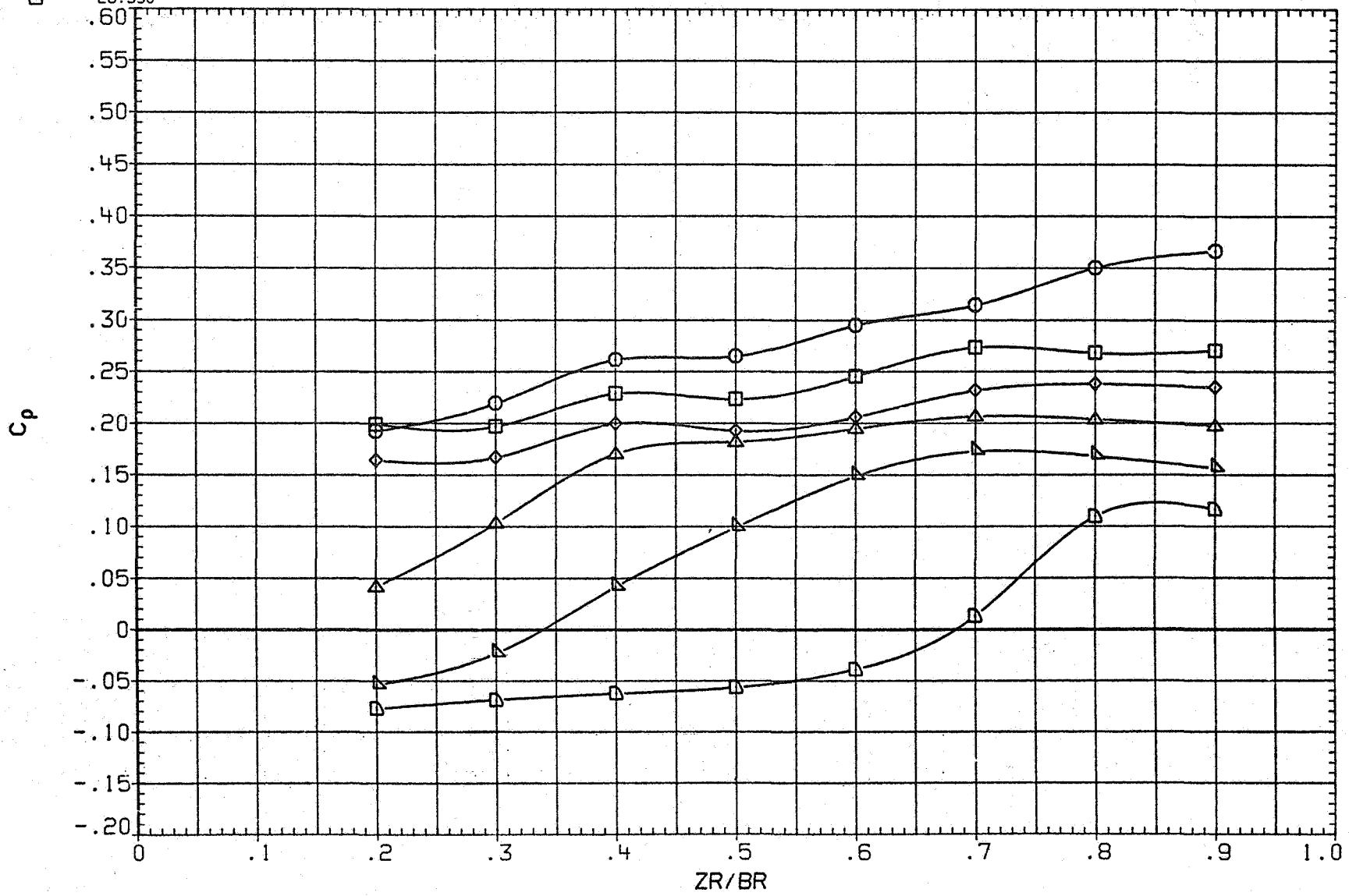

FIG 163 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 55

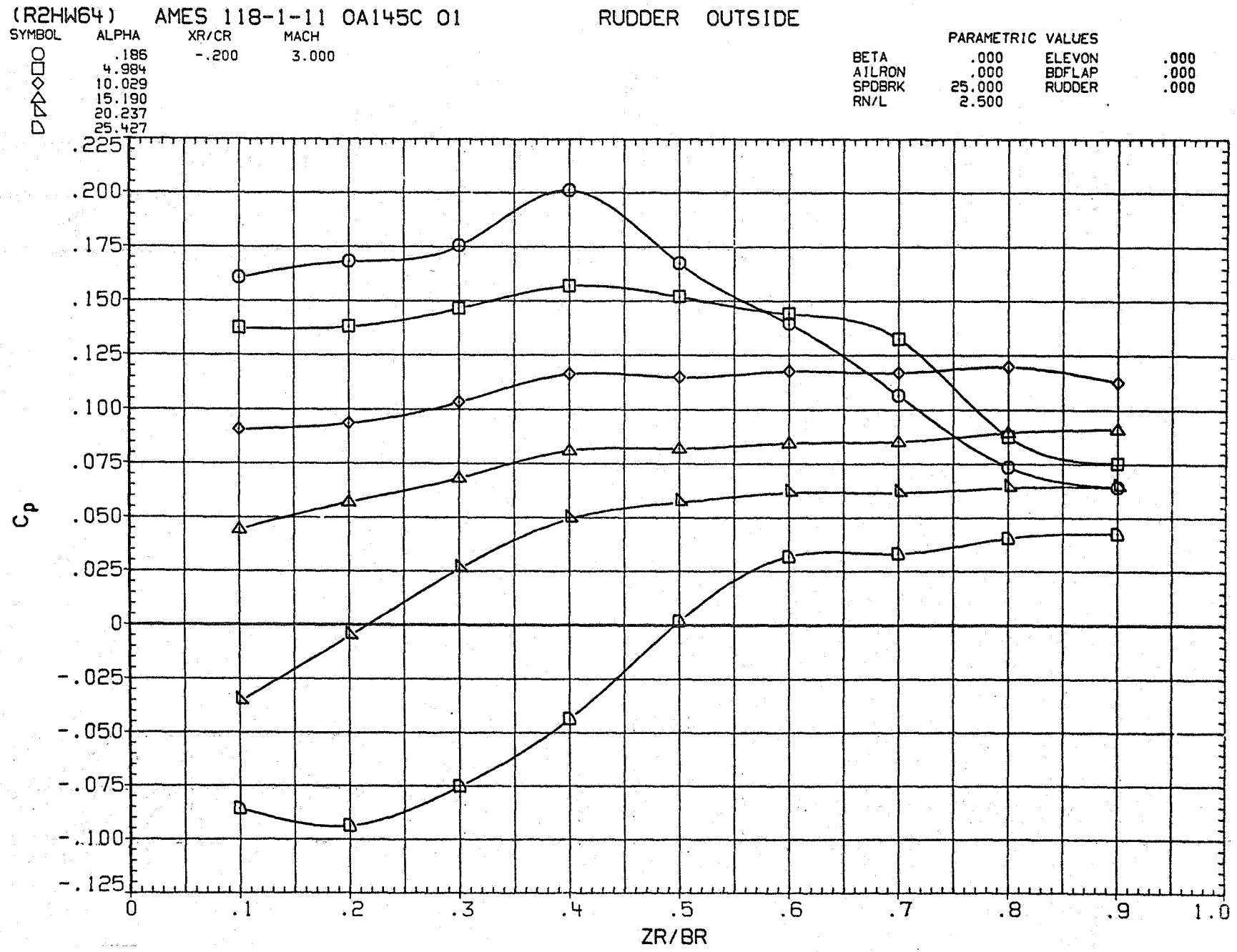

FIG 164 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

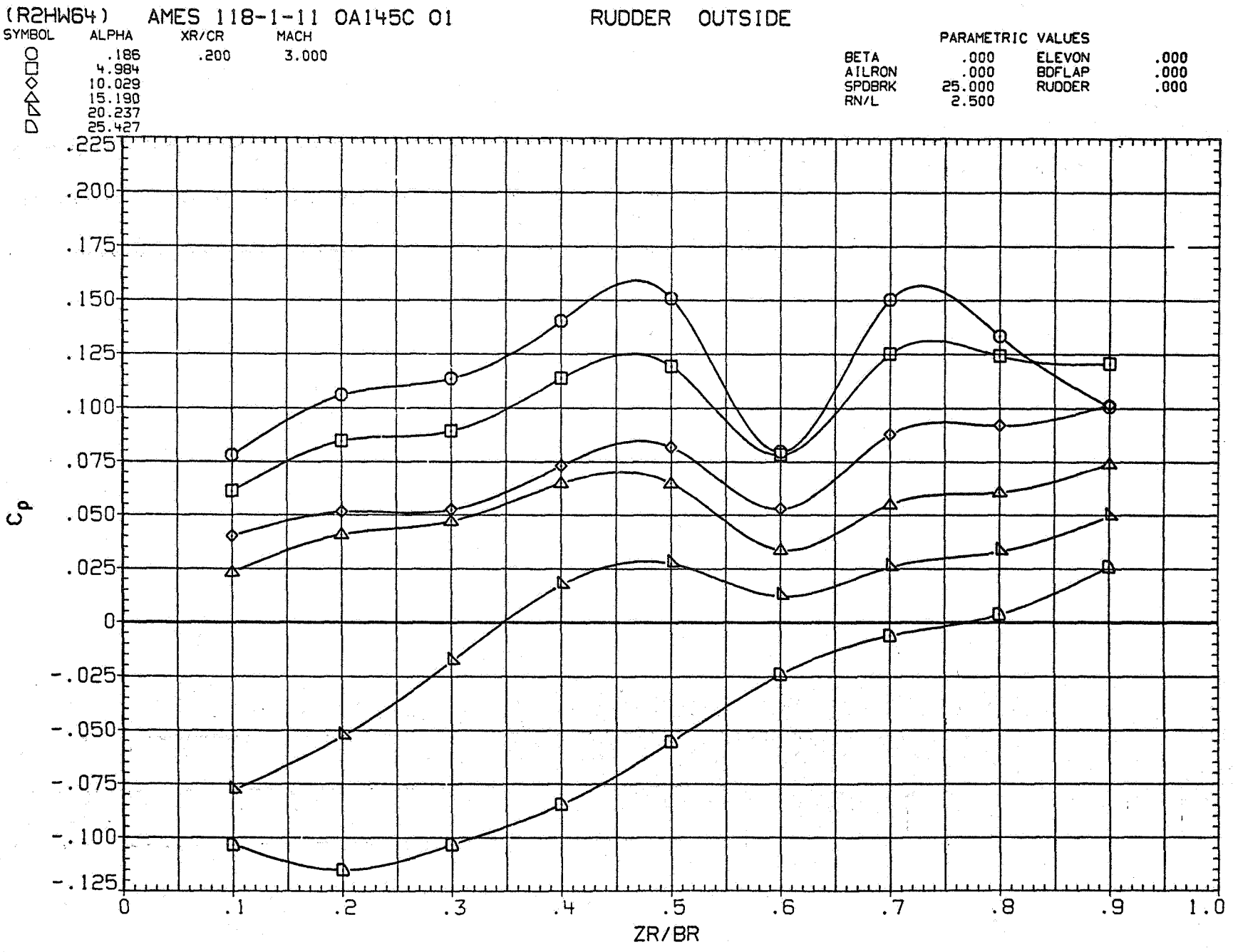

FIG 164 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW64) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.186	.600	3.000
□	4.984		
◇	10.029		
△	15.190		
▷	20.237		
D	25.427		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

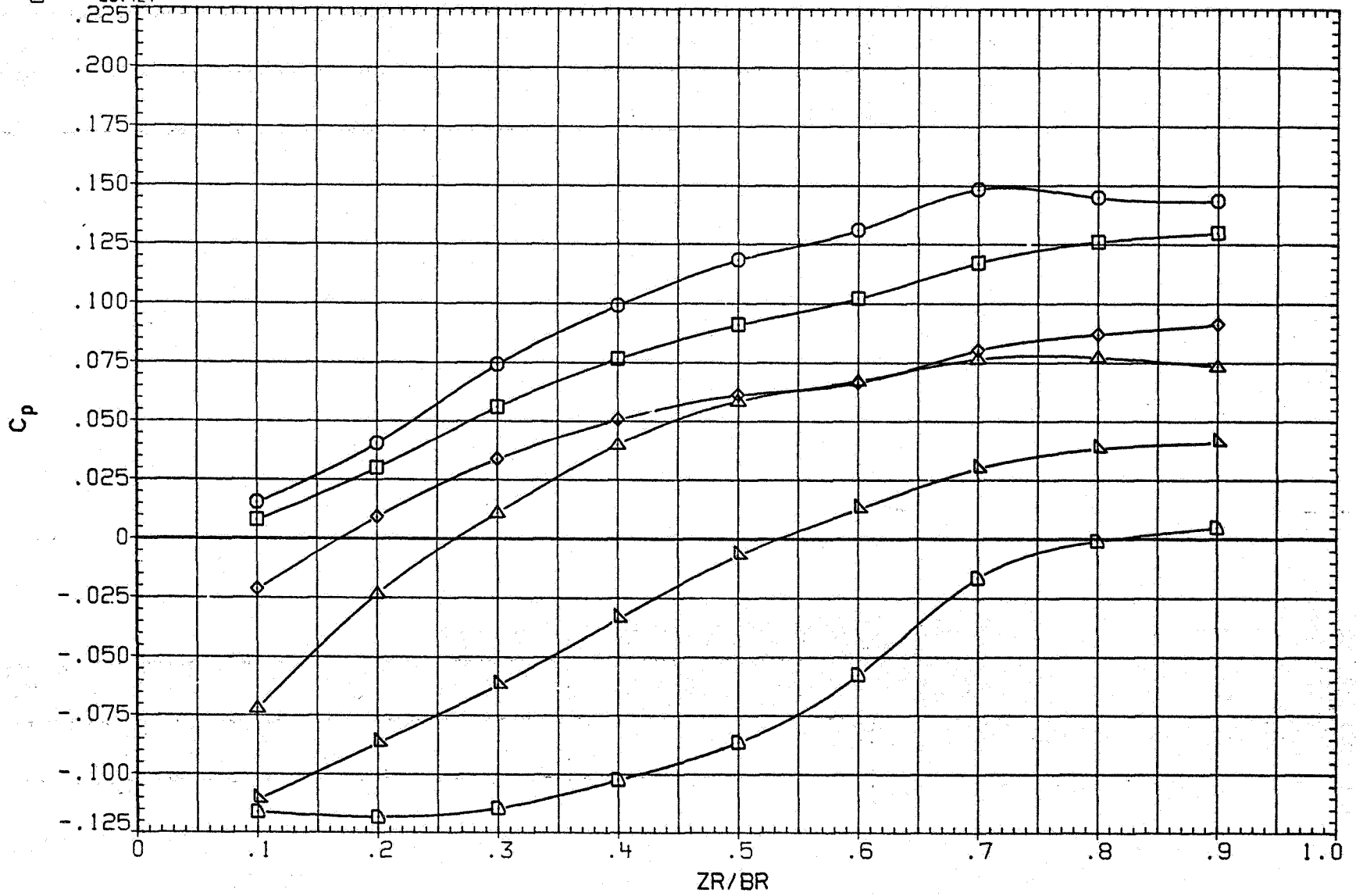

FIG 164 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

FIG 164 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 25

(R2HW85) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.305	-.200	3.000
□	5.011		
◇	10.077		
△	15.180		
◁	20.245		
D	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

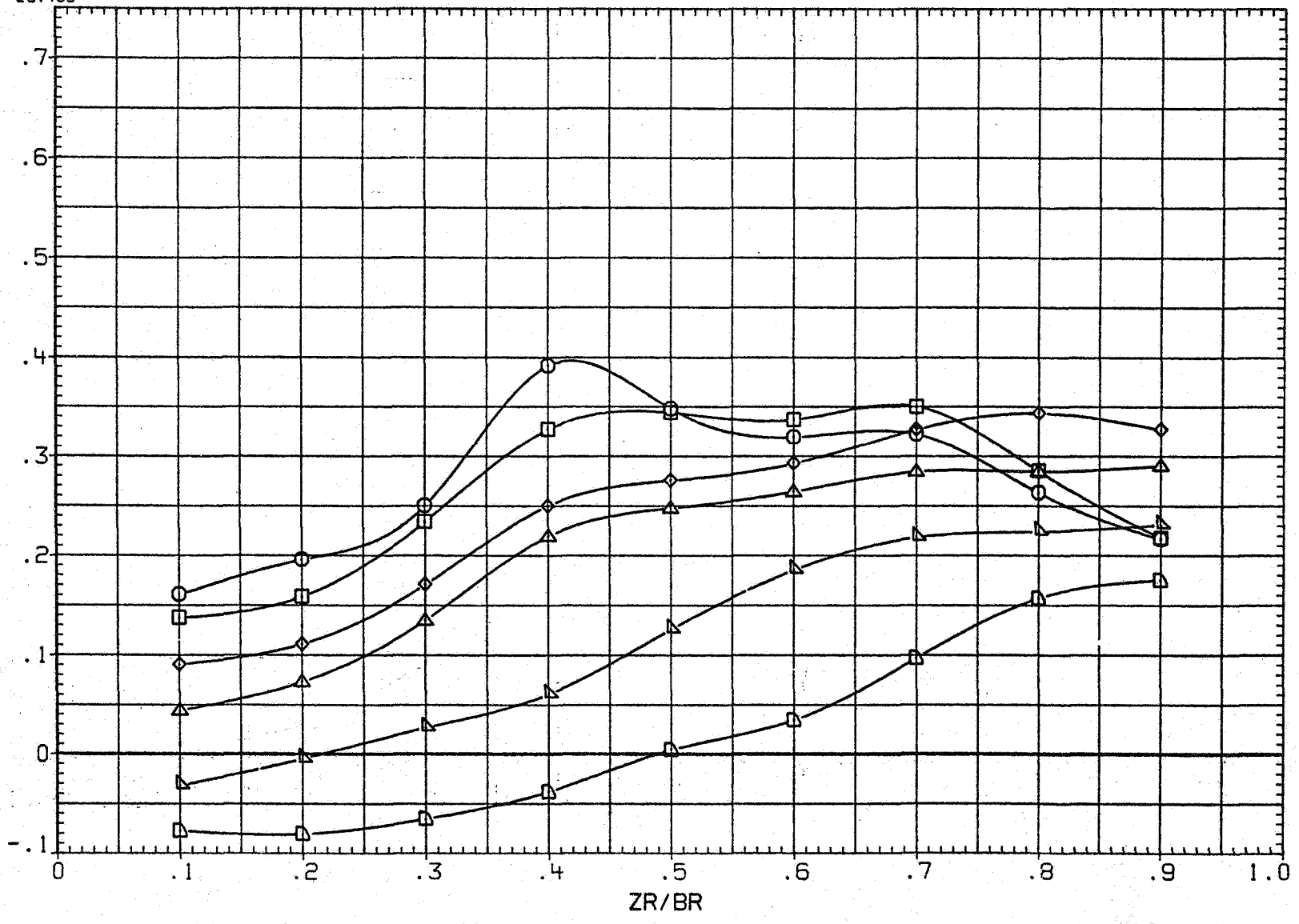

FIG 165 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.305	.200	3.000
□	5.011		
◇	10.077		
◁	15.180		
△	20.245		
▱	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

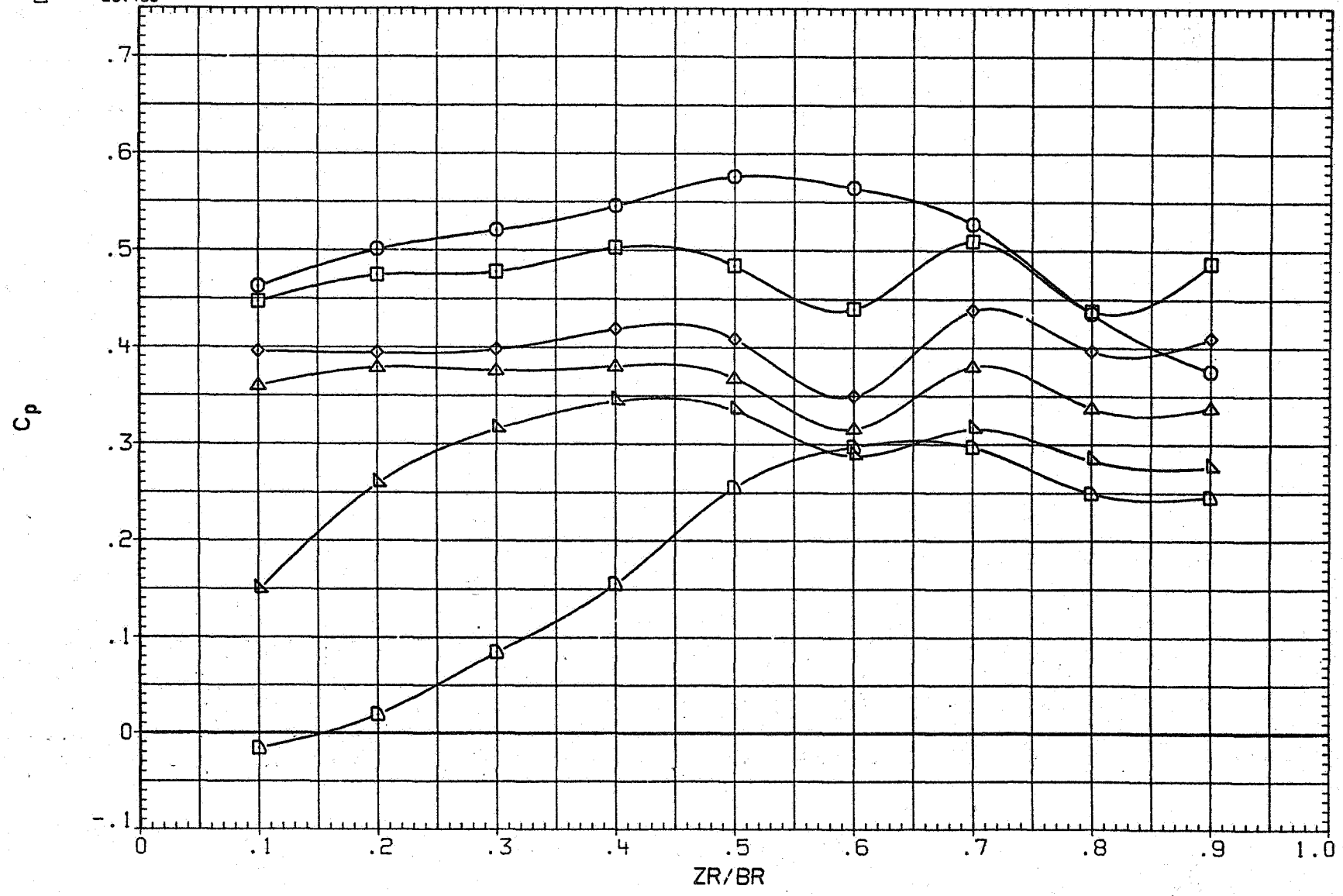

FIG 165 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.305	.600	3.000
□	5.011		
◇	10.077		
△	15.180		
▷	20.245		
D	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

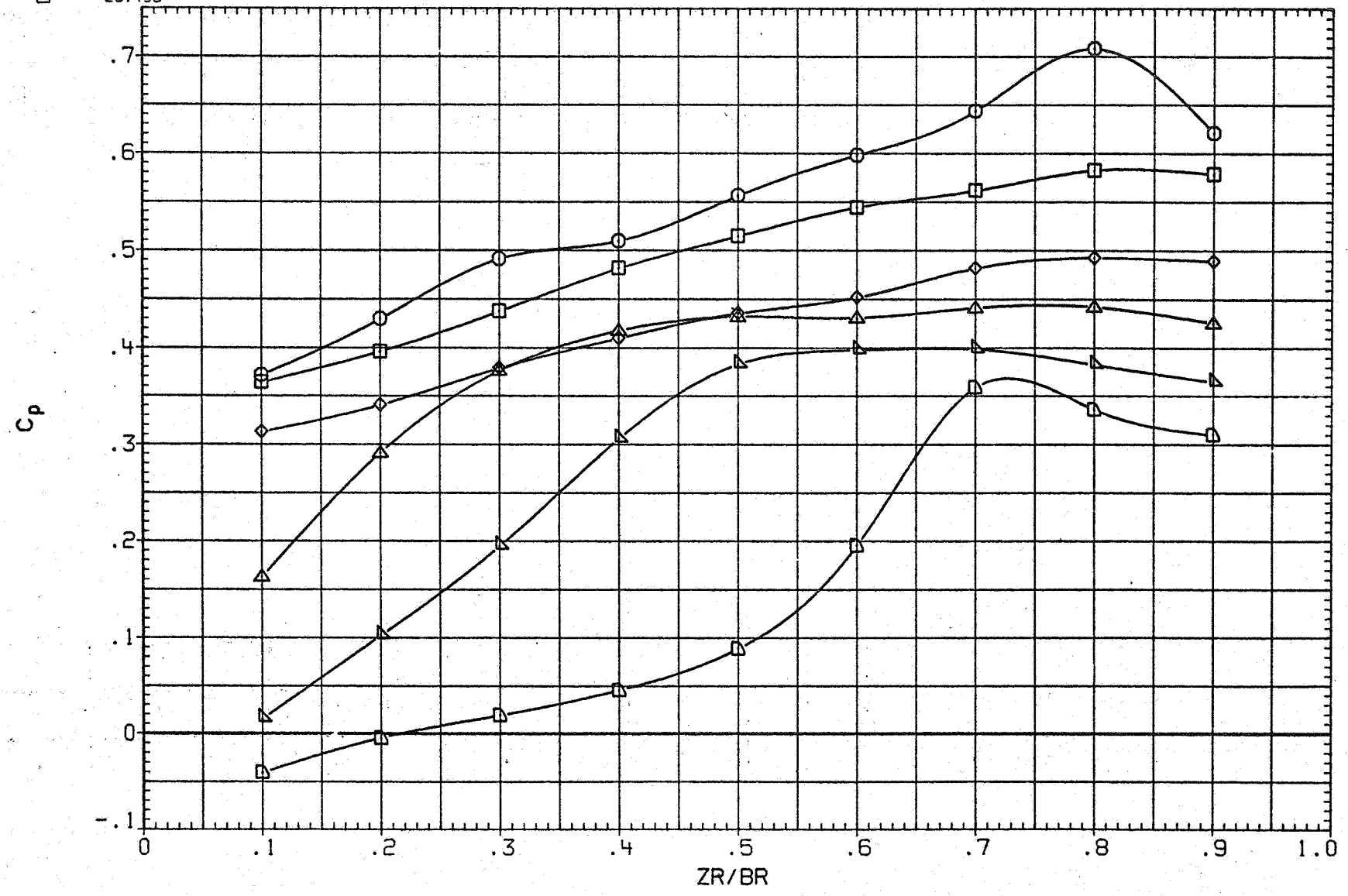

FIG 165 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW85) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.305	1.000	3.000
□	5.011		
◇	10.077		
△	15.180		
◺	20.245		
◻	25.455		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	70.000	RUDDER	.000
RN/L	2.500		

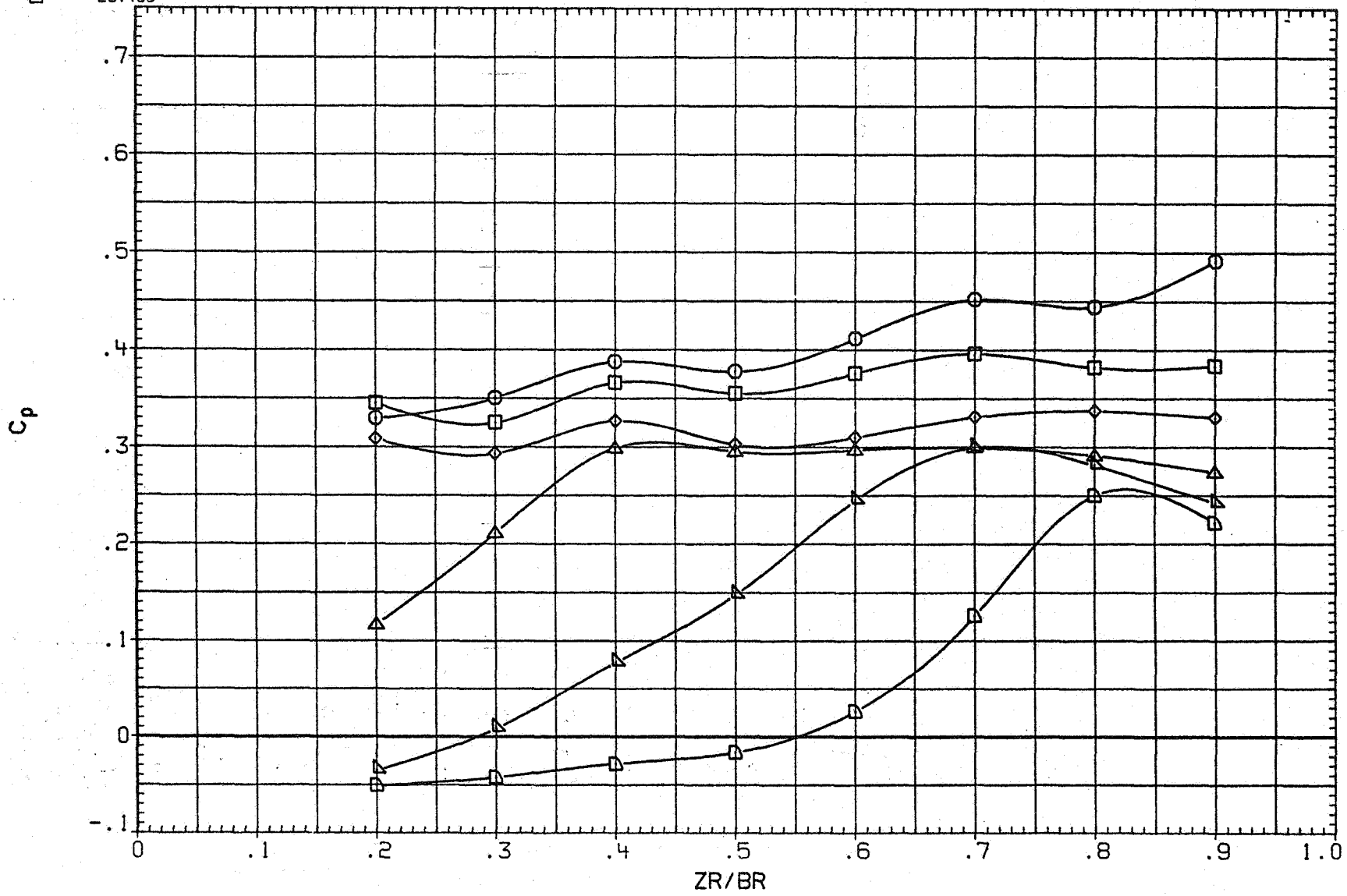

FIG 165 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 70

(R2HW94) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.175	-.200	3.000
□	5.049		
◇	10.118		
△	15.169		
◺	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

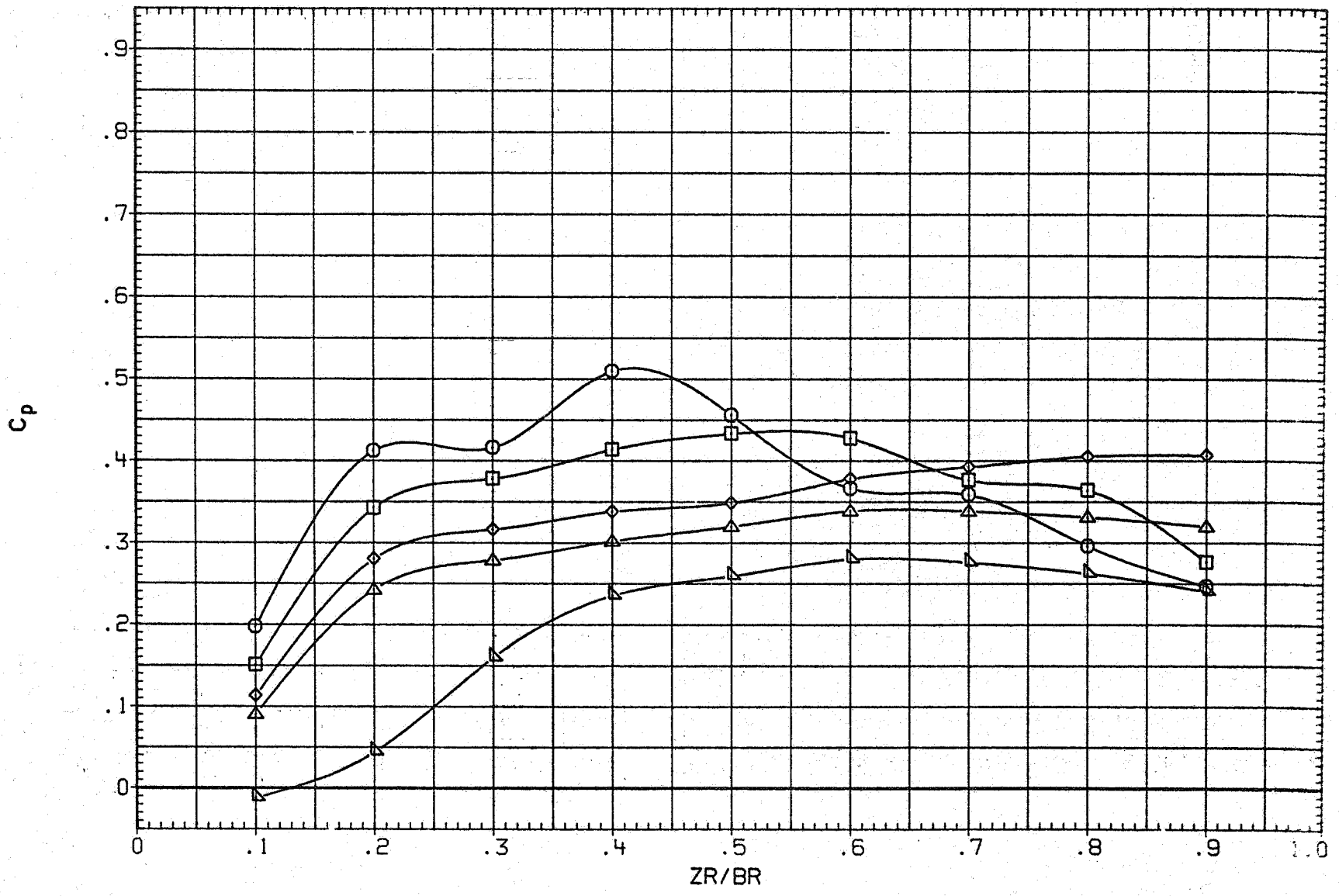

FIG 166 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.175	.200	3.000
□	5.049		
◇	10.118		
△	15.169		
◺	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

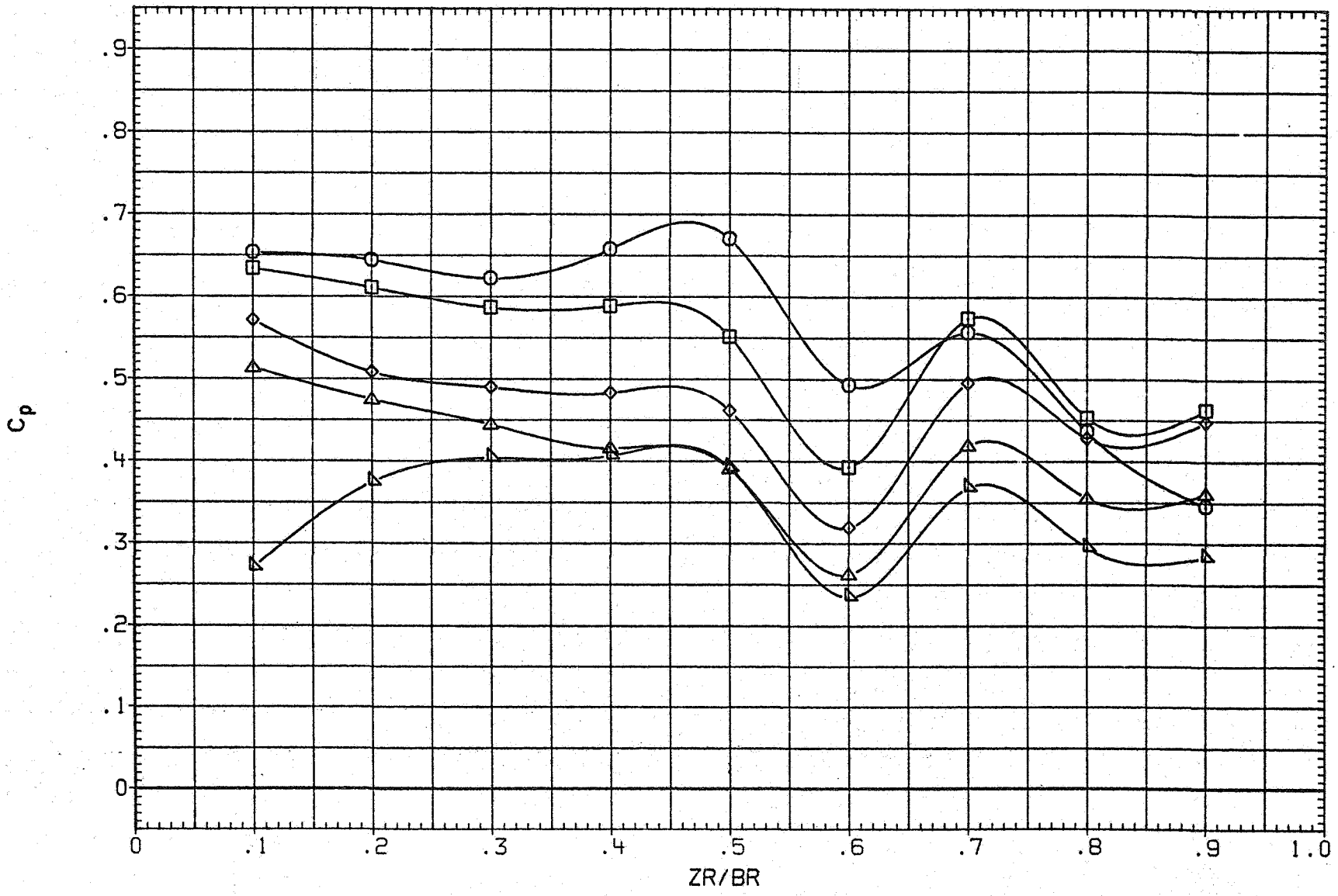

FIG 166 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.175	.600	3.000
□	5.049		
◇	10.118		
△	15.169		
◺	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

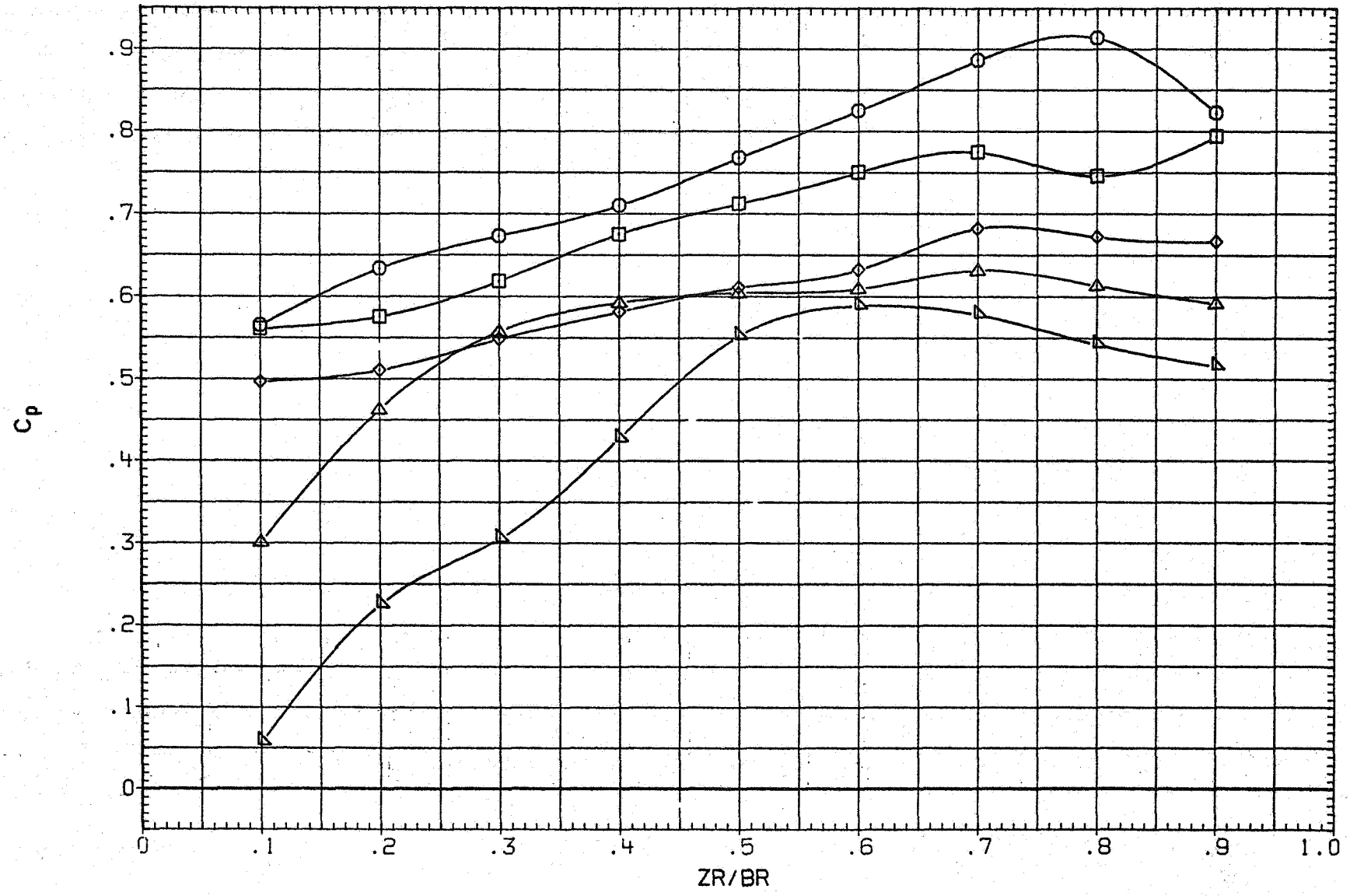

FIG 166 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW94) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	ALPHA	XR/CR	MACH
○	.175	1.000	3.000
□	5.049		
◇	10.118		
◁	15.169		
◺	20.260		

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

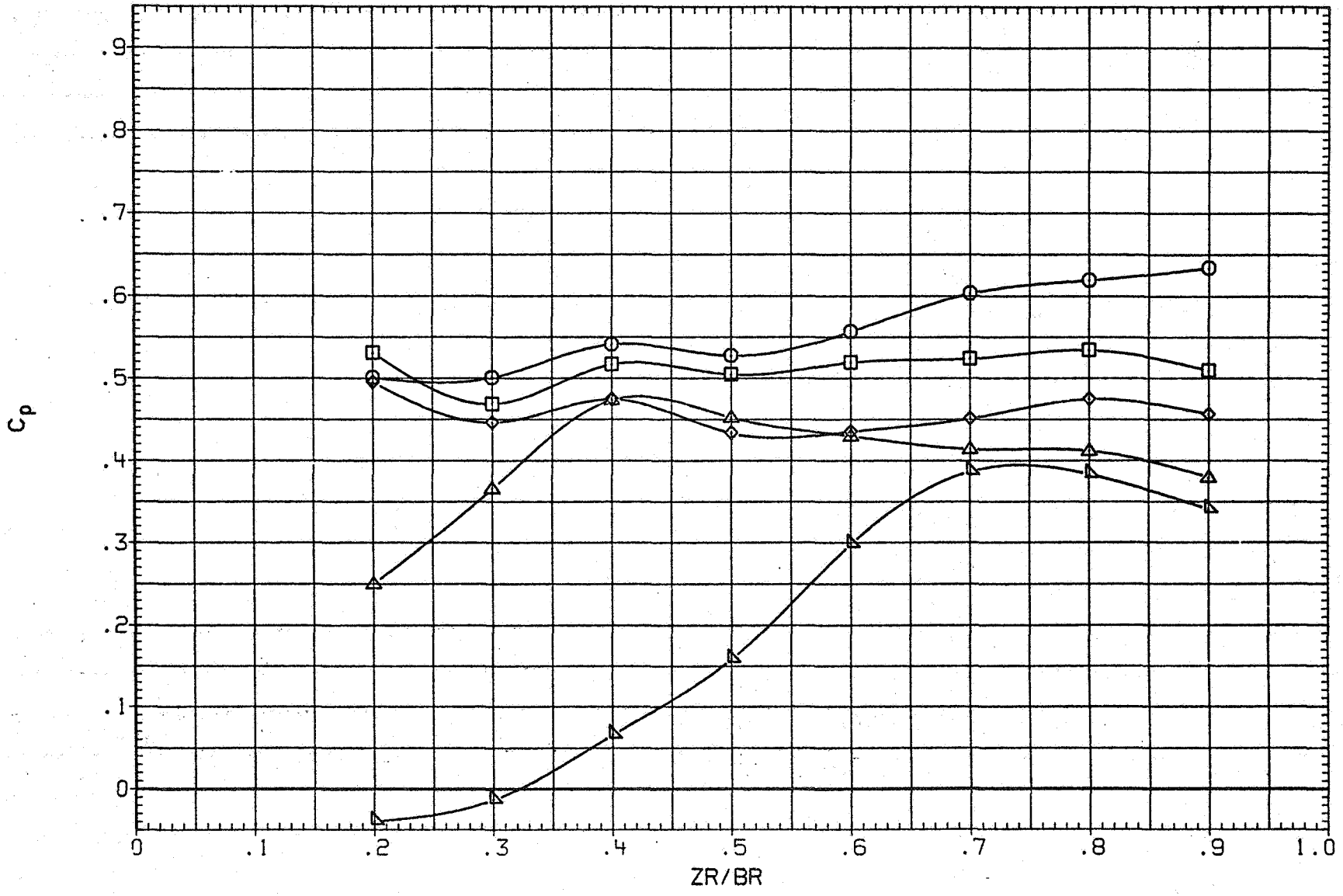

FIG 166 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, ALPHA EFFECT AT SPDBRK = 87.2

(R2HW07) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.307	-.200	3.001
□	-2.116		
◇	.008		
△	2.137		
◺	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

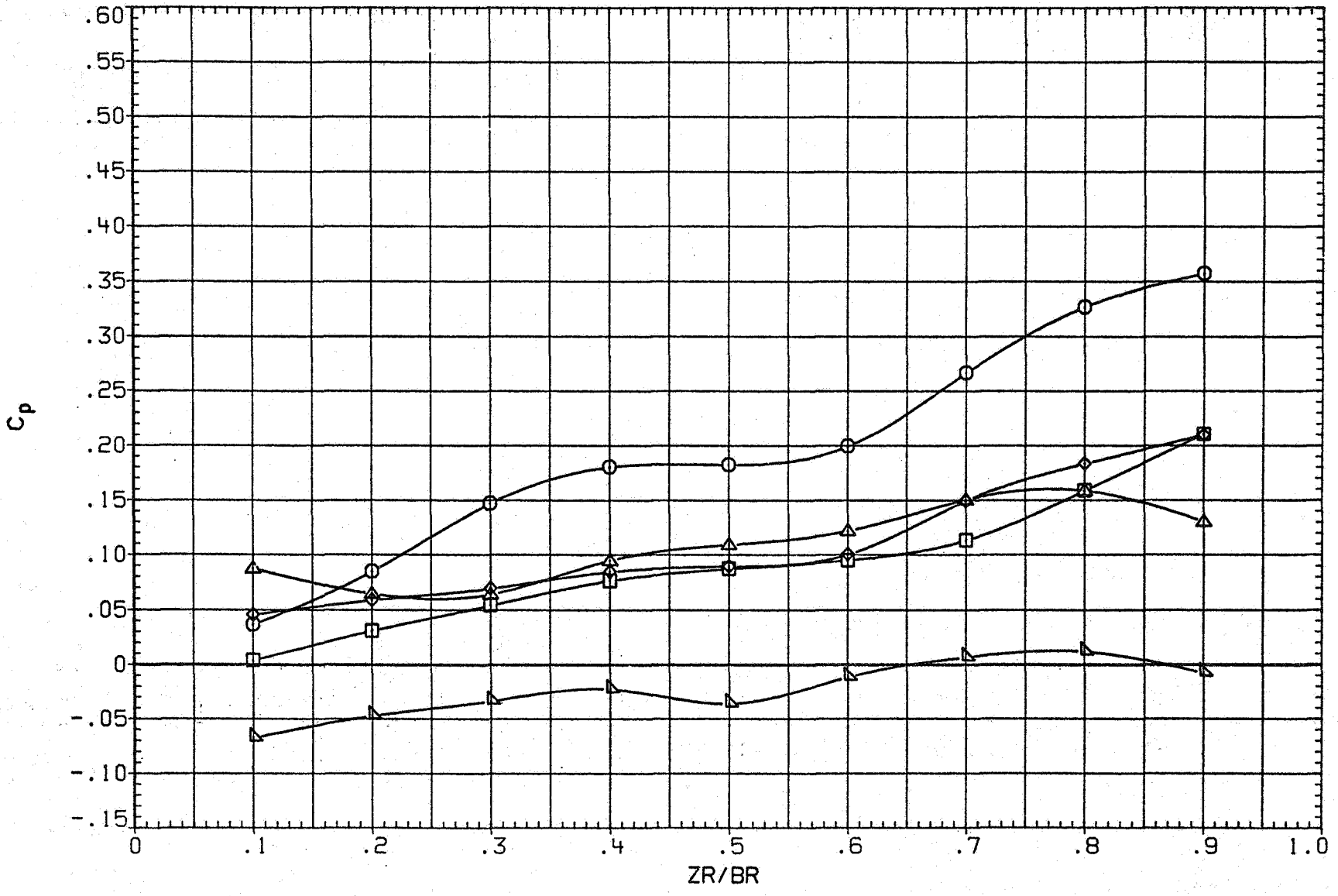

FIG 167 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.307	.200	3.001
□	-2.116		
◇	.008		
△	2.137		
◺	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

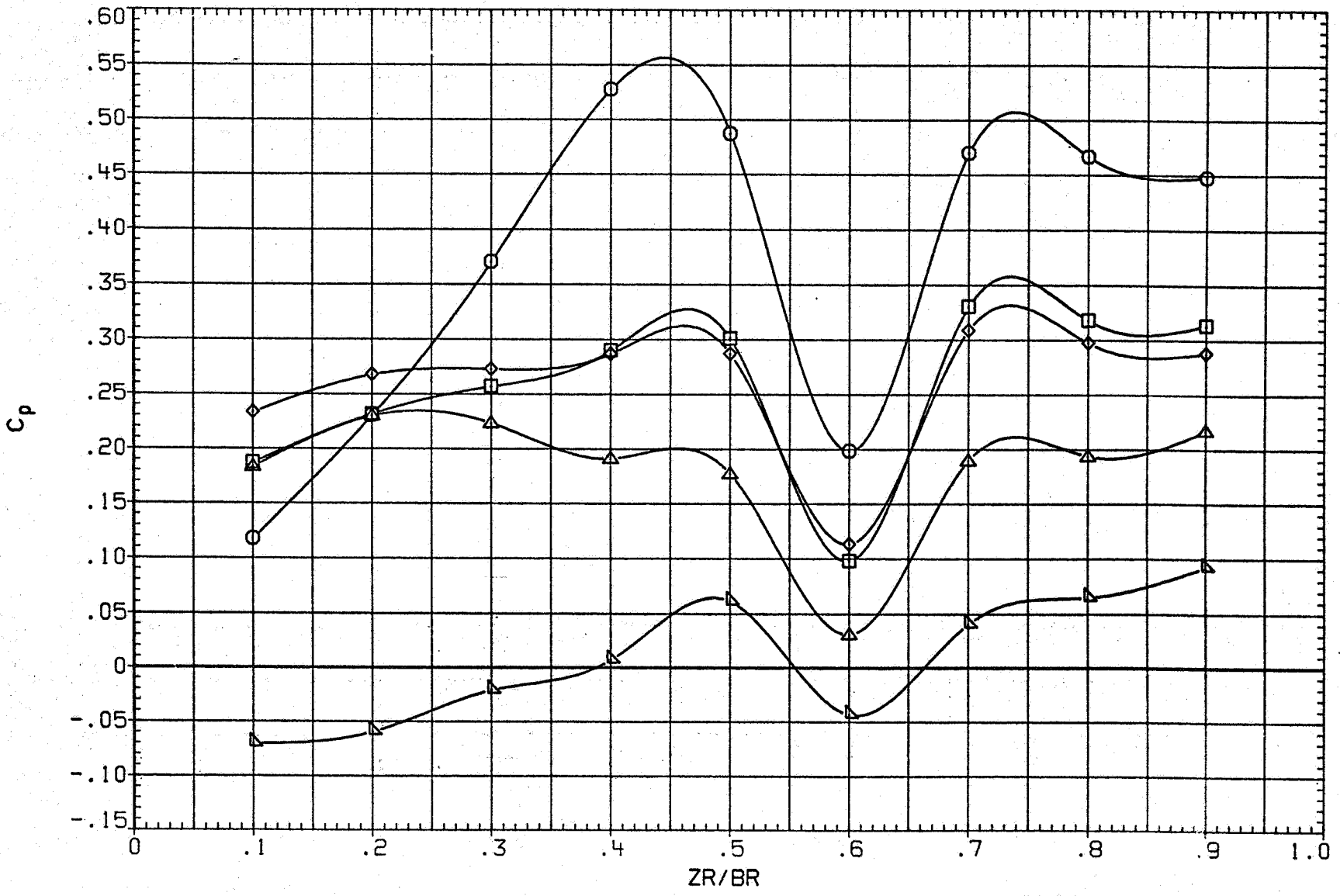

FIG 167 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.307	.600	3.001
□	-2.116		
◇	.008		
△	2.137		
◺	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

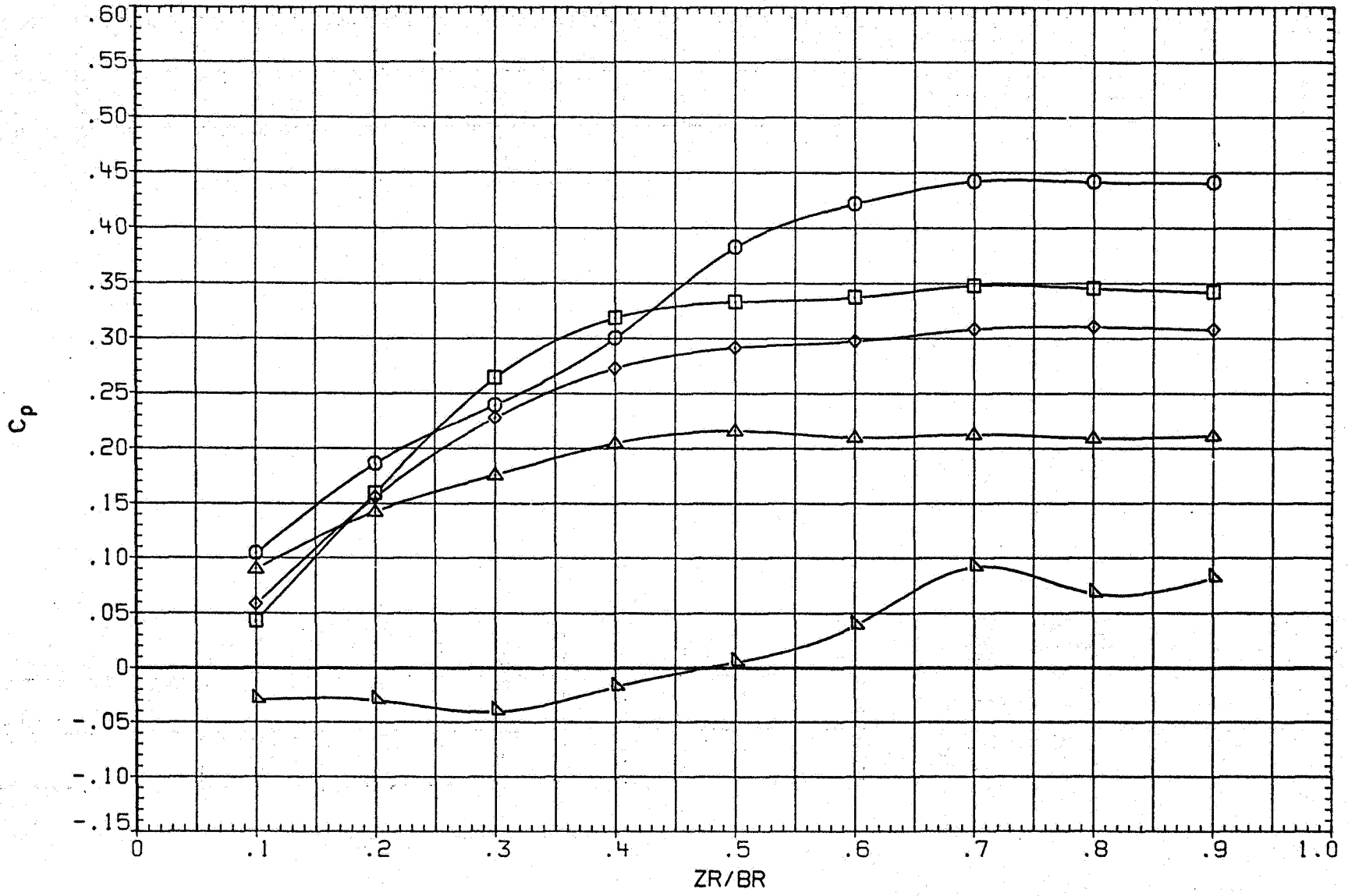

FIG 167 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW07) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.307	1.000	3.001
□	-2.116		
◇	.008		
△	2.137		
◺	6.366		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	55.000	RUDDER	.000
RN/L	2.500		

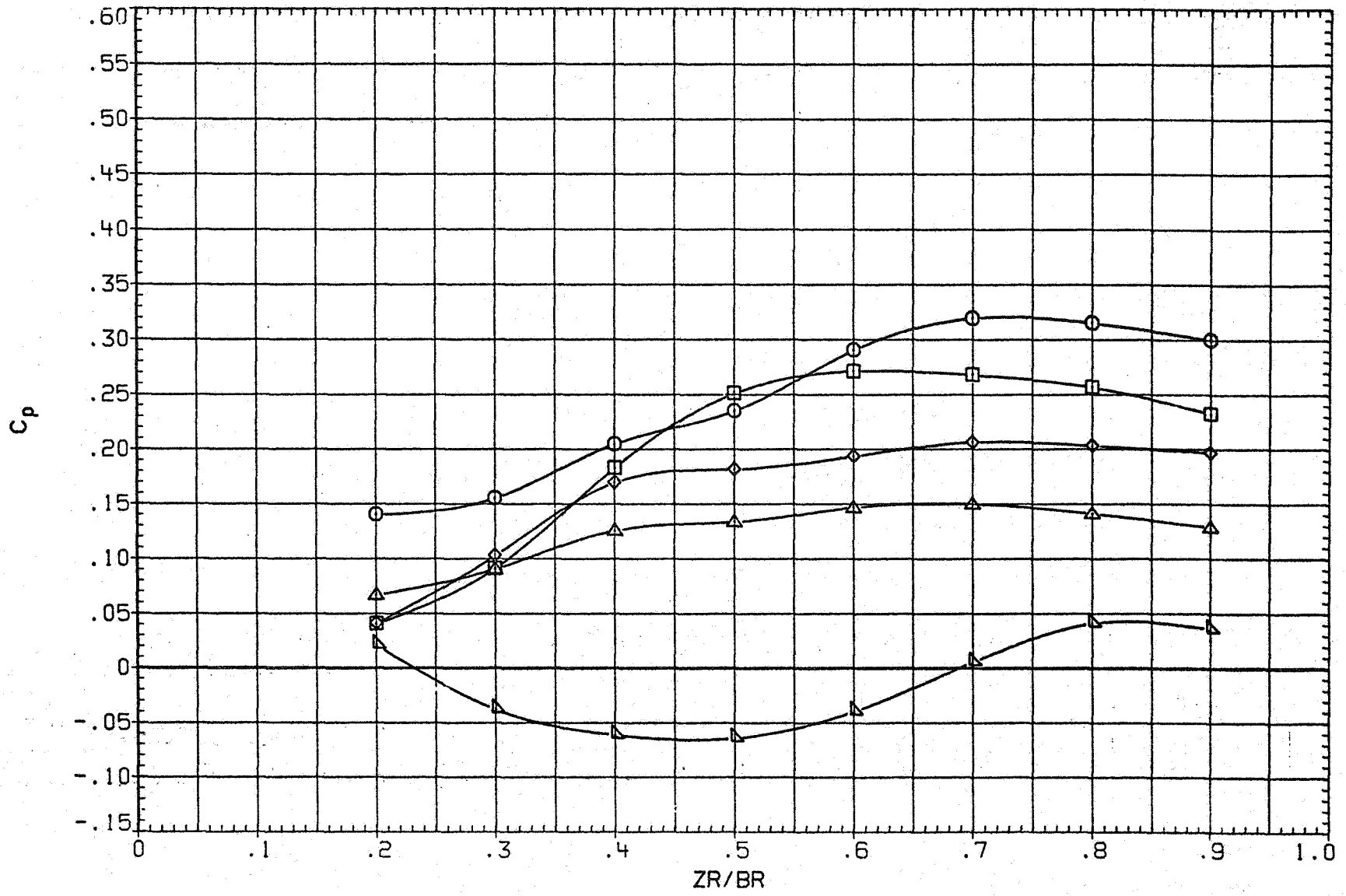

FIG 167 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 55

(R2HW66) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.323	-.200	3.000
□	-2.123		
◇	-.009		
△	2.144		
▷	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

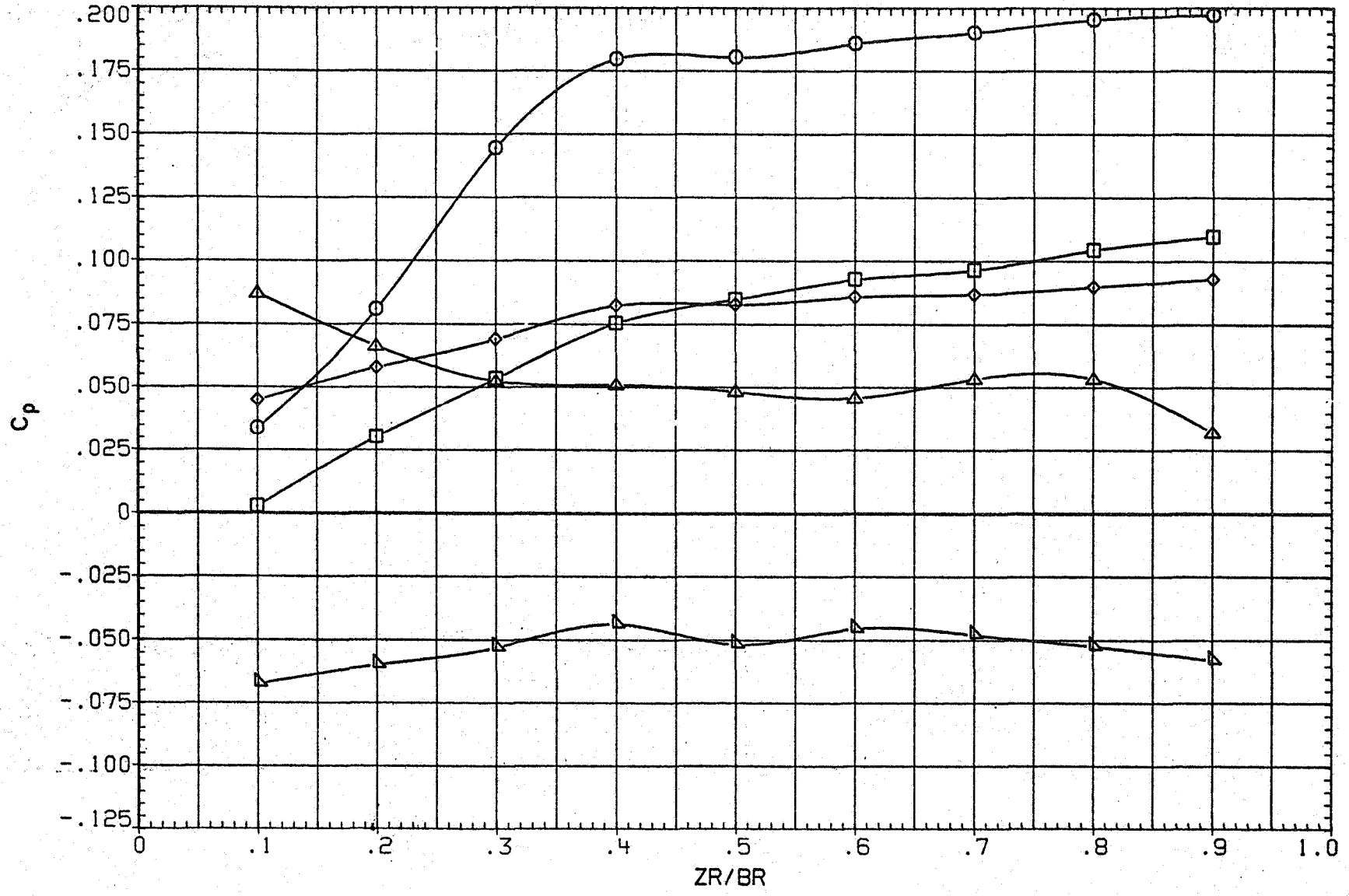

FIG 168 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.323	.200	3.000
□	-2.123		
◇	-.009		
△	2.144		
◺	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

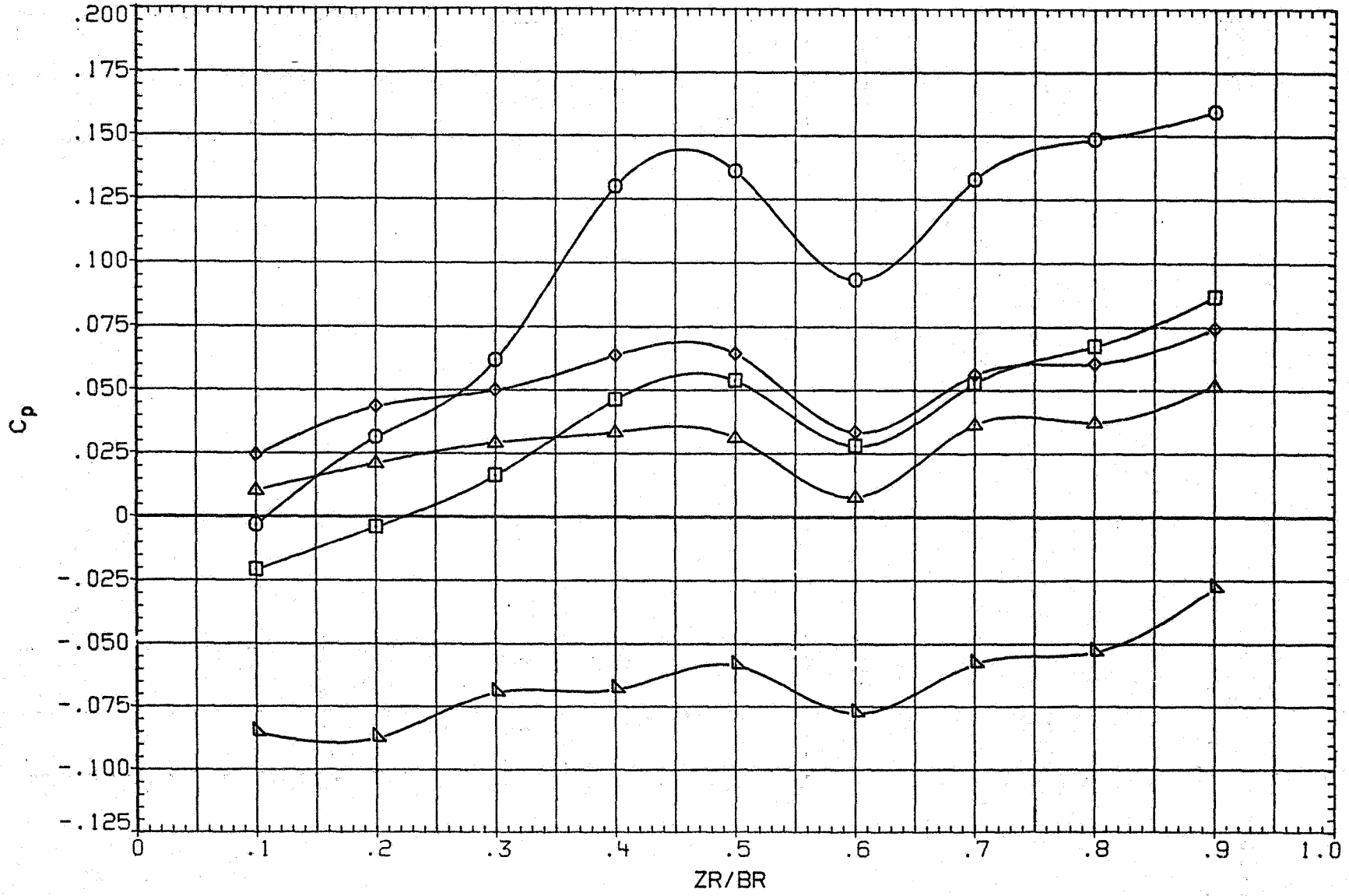

FIG 168 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.323	.600	3.000
□	-2.123		
◇	-.009		
△	2.144		
◁	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

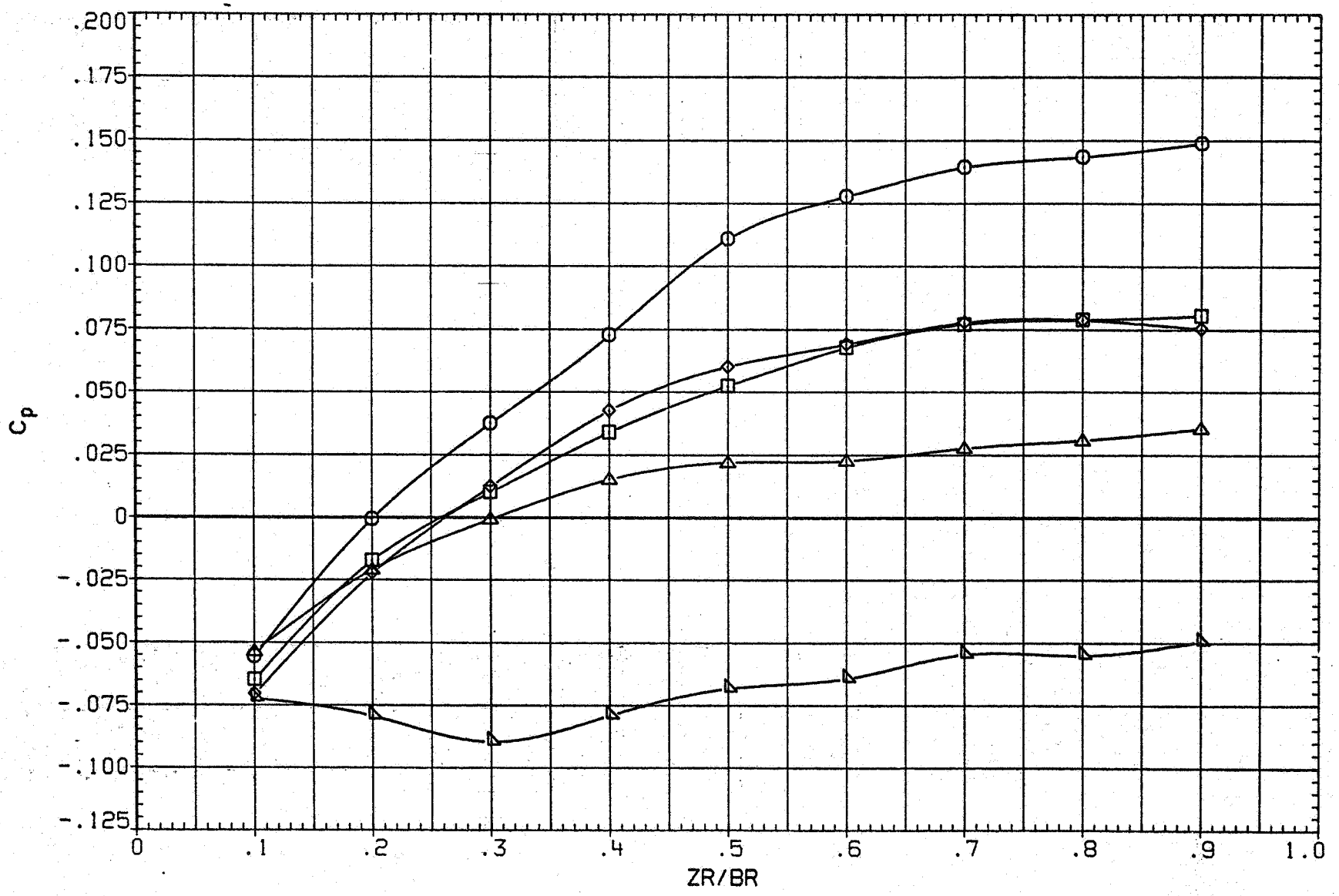

FIG 168 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW66) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.323	1.000	3.000
□	-2.123		
◇	-.009		
△	2.144		
◁	6.371		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	25.000	RUDDER	.000
RN/L	2.500		

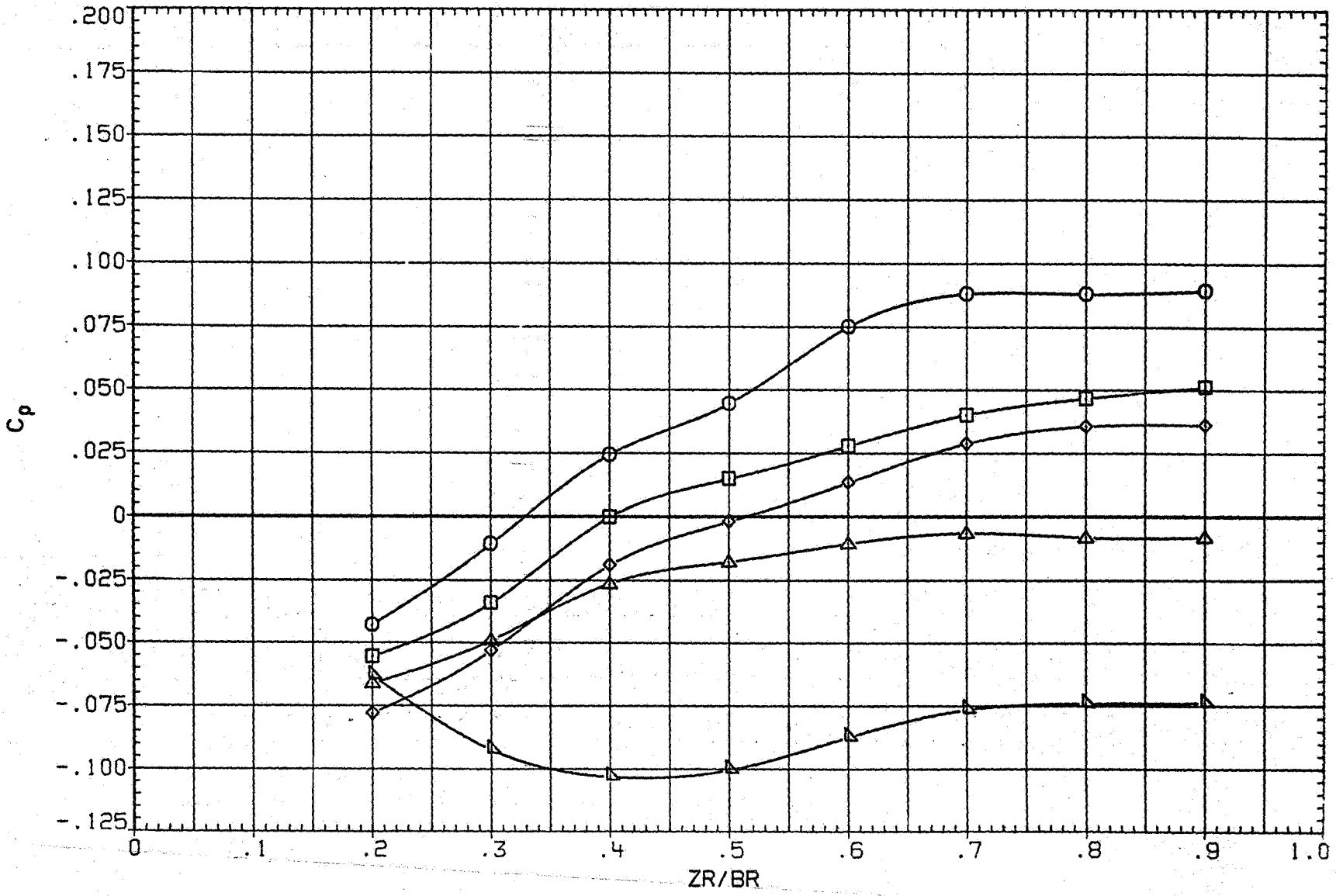

FIG 168 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 25

(R2HW96) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.387	-.200	3.000
□	-2.179		
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

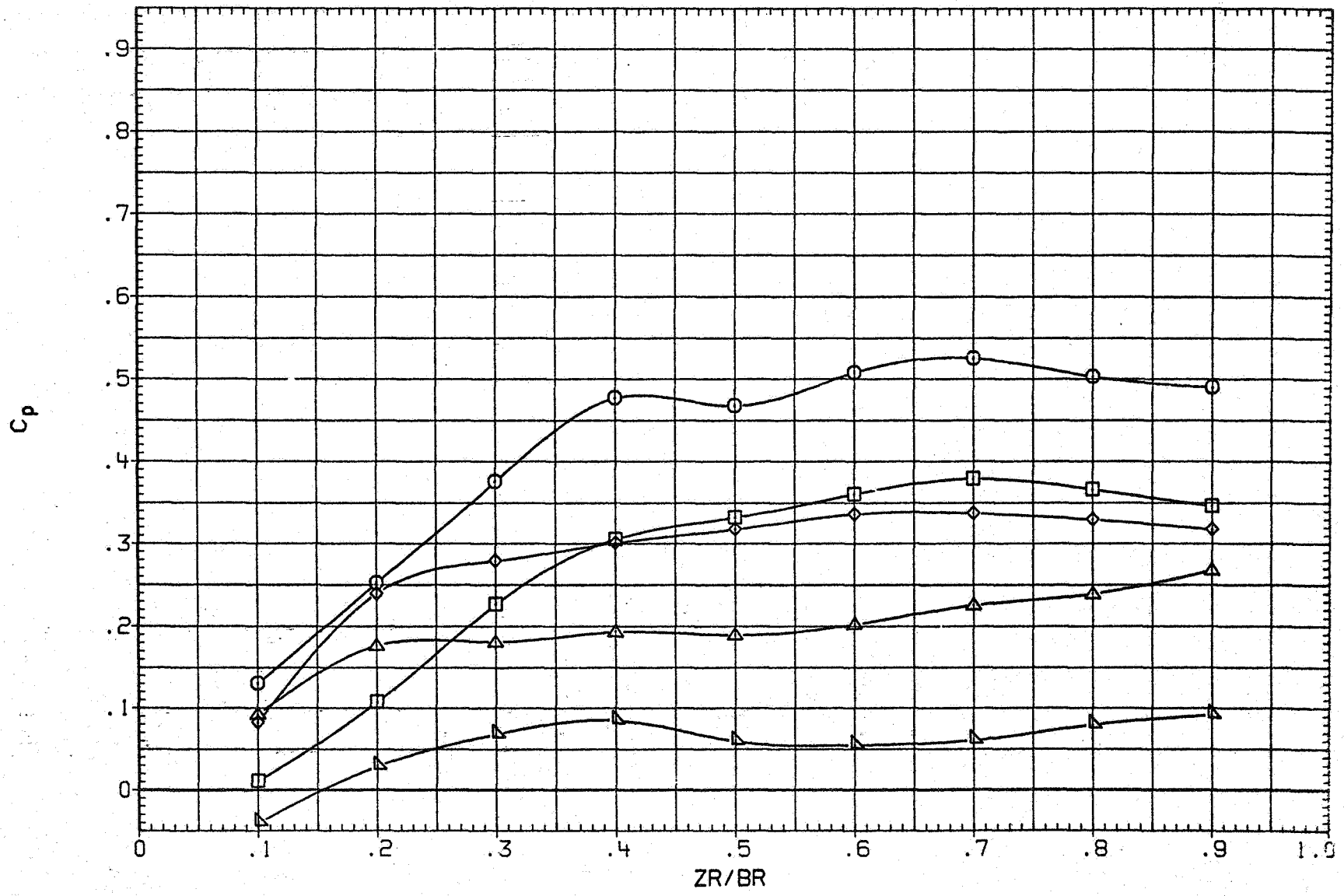

FIG 169 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.387	.200	3.000
□	-2.179		
◇	-.058		
△	2.075		
◁	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

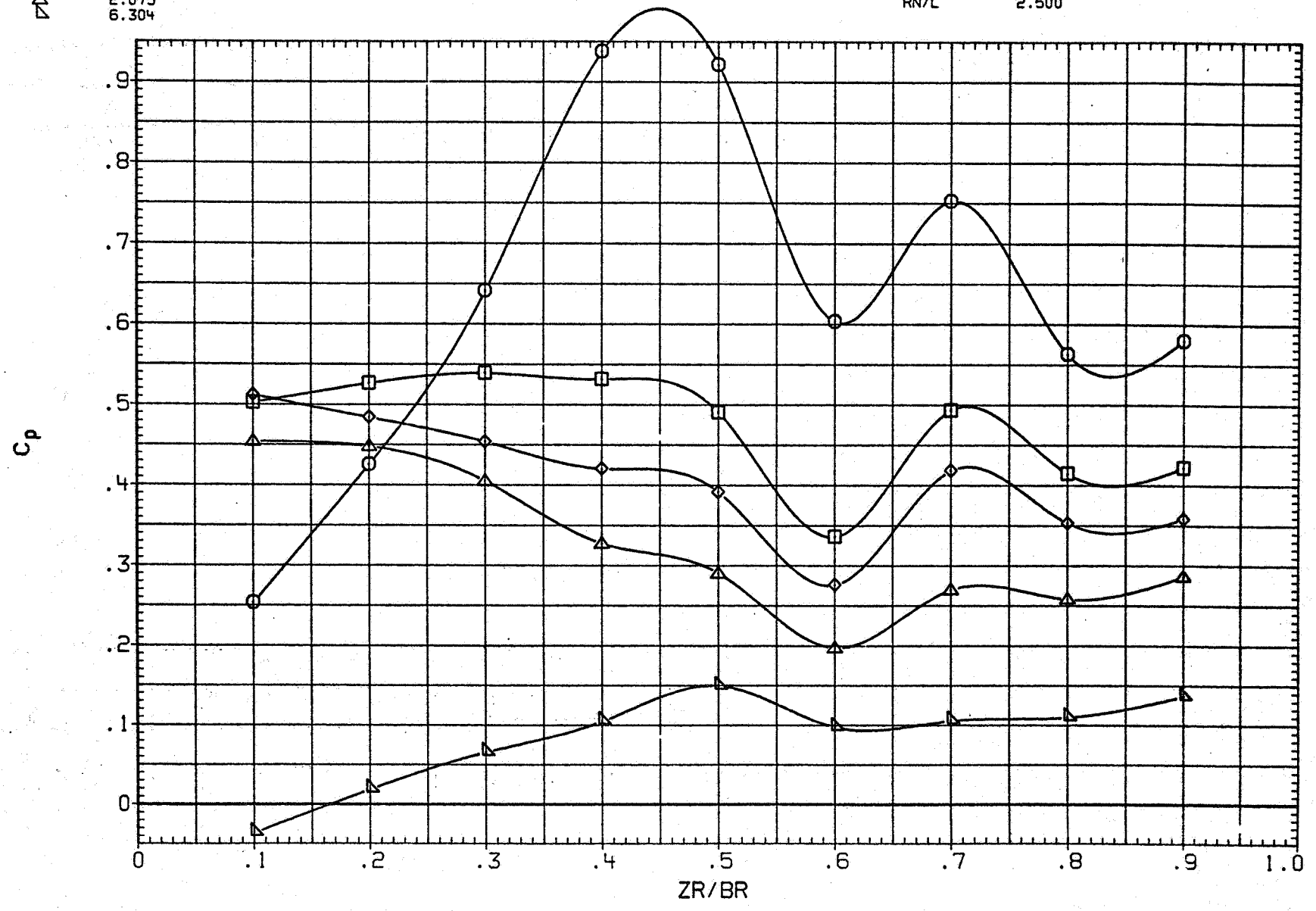

FIG 169 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.387	.600	3.000
□	-2.179		
◇	-.058		
◁	2.075		
△	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

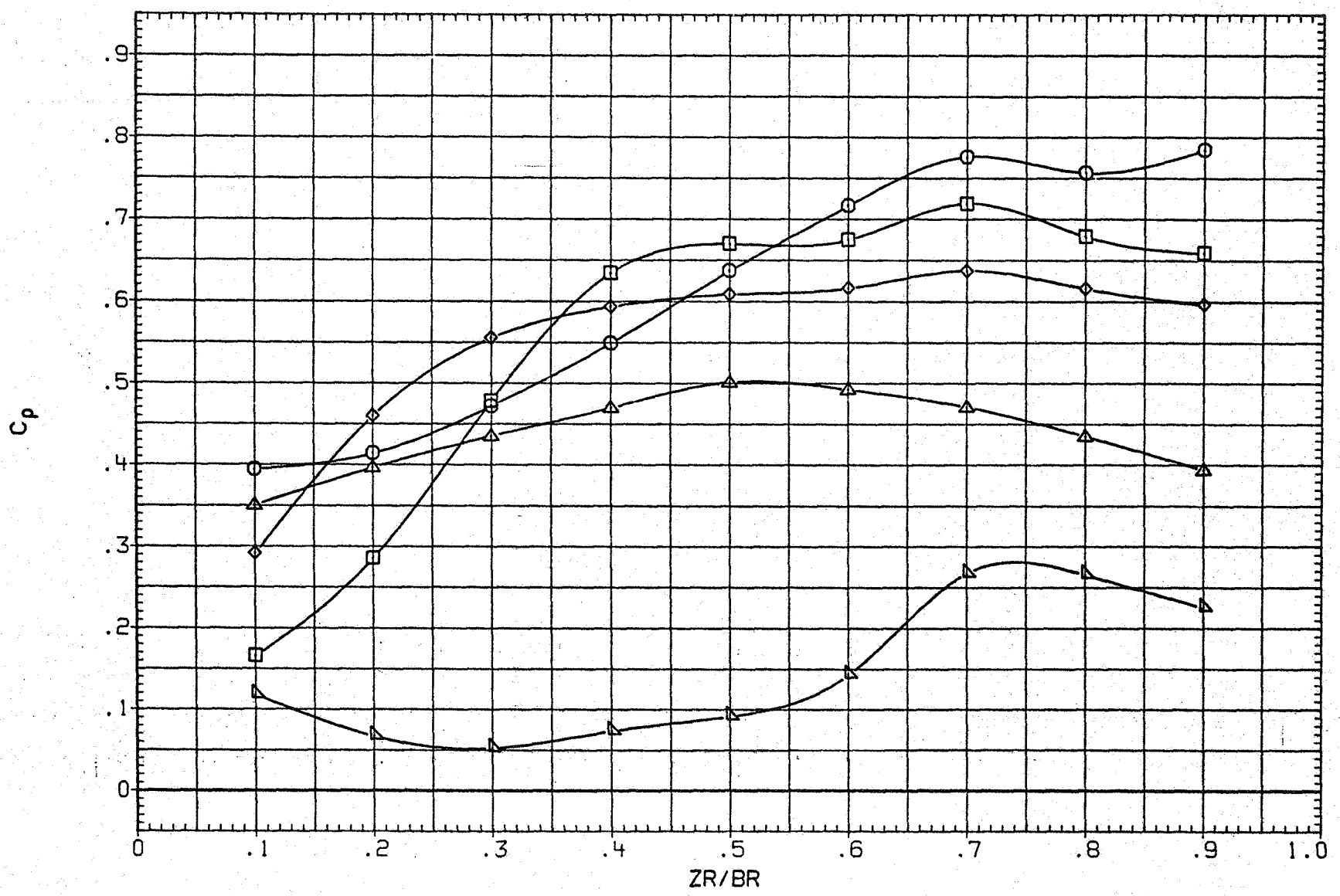

FIG 169 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW96) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	BETA	XR/CR	MACH
○	-6.387	1.000	3.000
□	-2.179		
◇	-.058		
△	2.075		
◺	6.304		

PARAMETRIC VALUES

ALPHA	15.000	ELEVON	.000
AILRON	.000	BDFLAP	.000
SPDBRK	87.200	RUDDER	.000
RN/L	2.500		

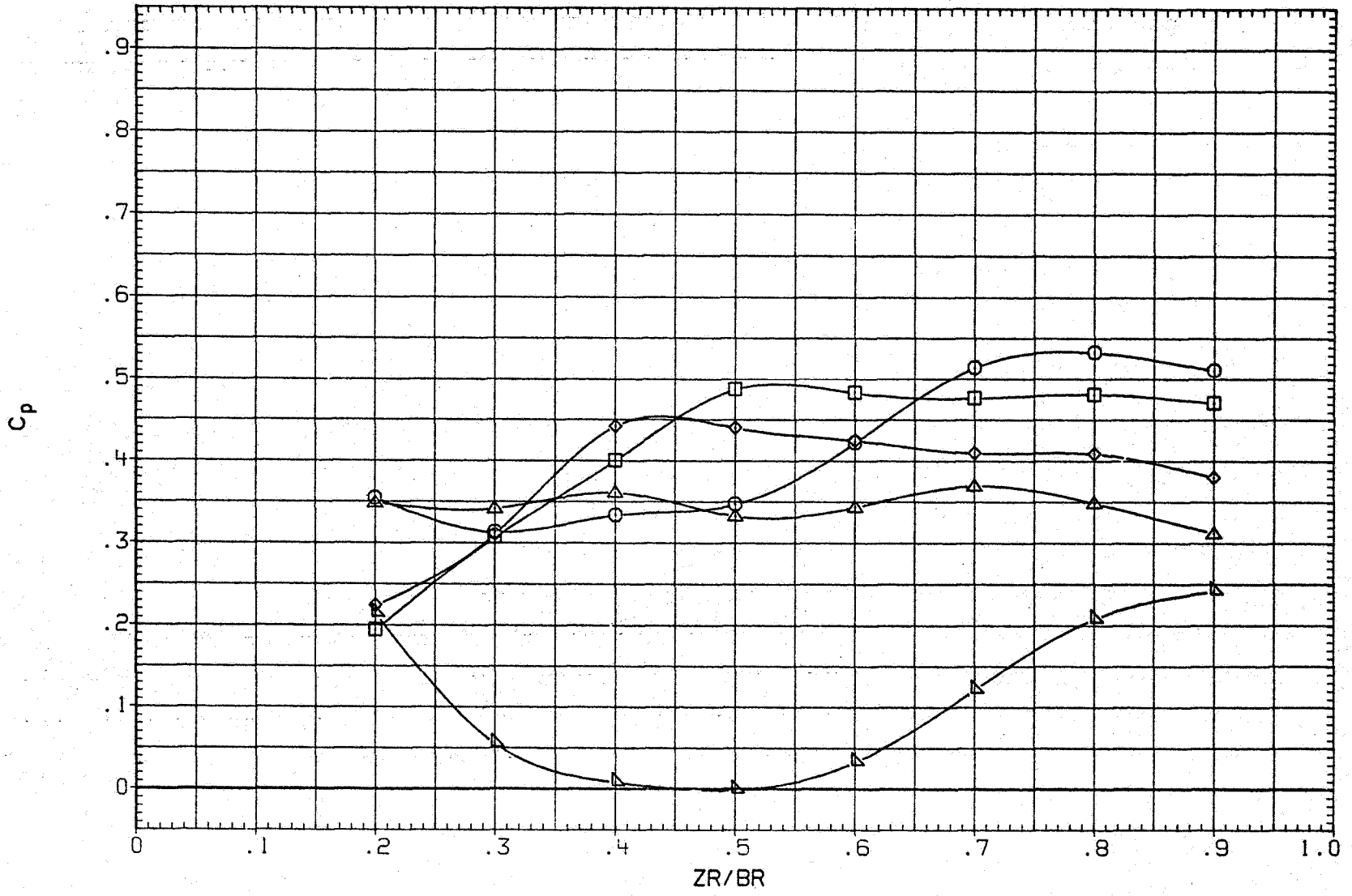

FIG 169 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, BETA EFFECT AT SPDBRK = 87.2

(R2HW49) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.947	-.200	3.000
□	-9.485		
◇	-4.946		
△	.036		
▷	4.978		
▷	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

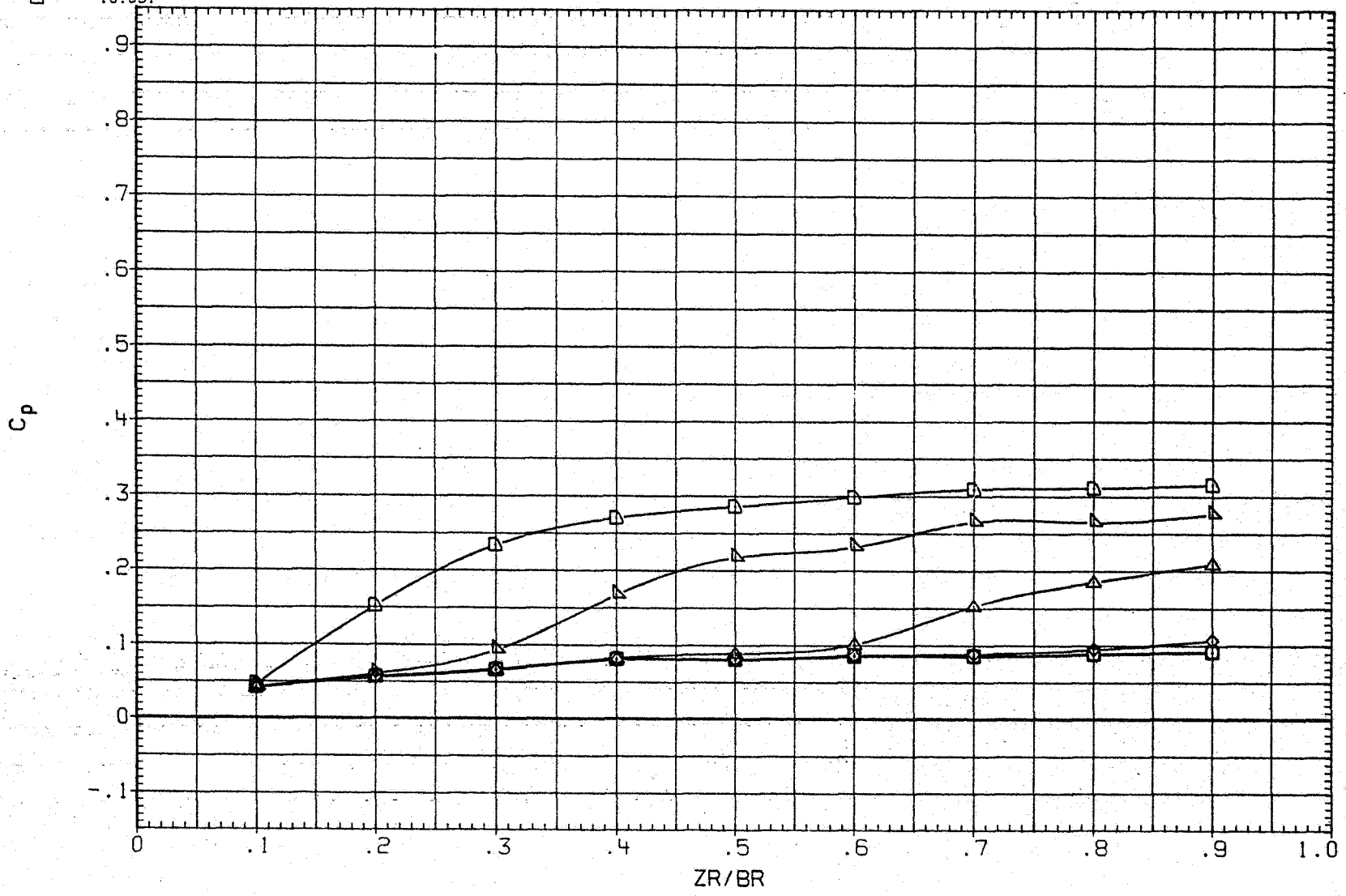

FIG 170 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW49) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.947	.200	3.000
□	-9.485		
◇	-4.946		
△	.036		
◁	4.978		
▷	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

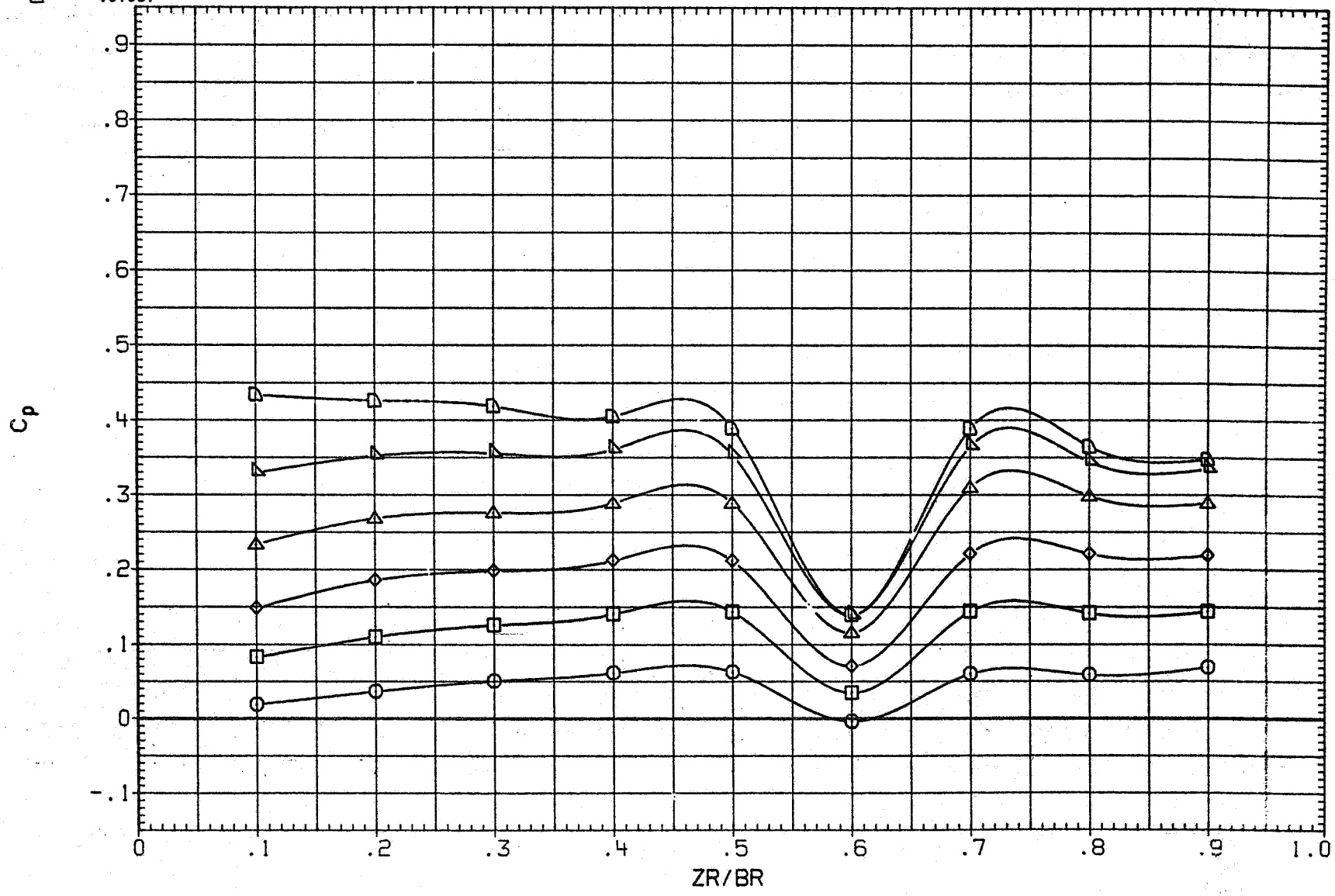

FIG 170 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW49) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.947	.600	3.000
□	-9.485		
◇	-4.946		
△	.036		
◁	4.978		
D	10.031		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	55.000
RN/L	2.500		

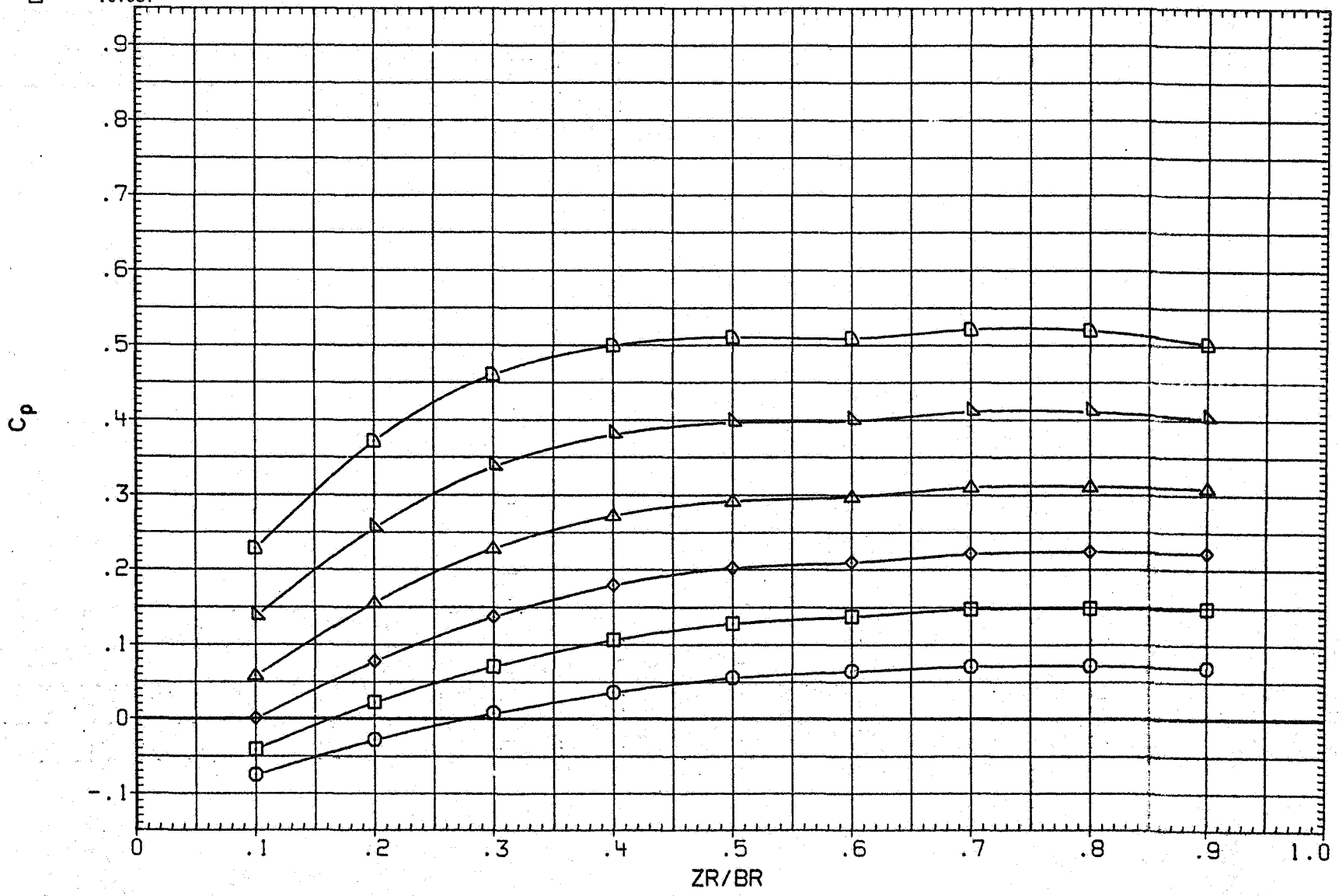

FIG 170 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

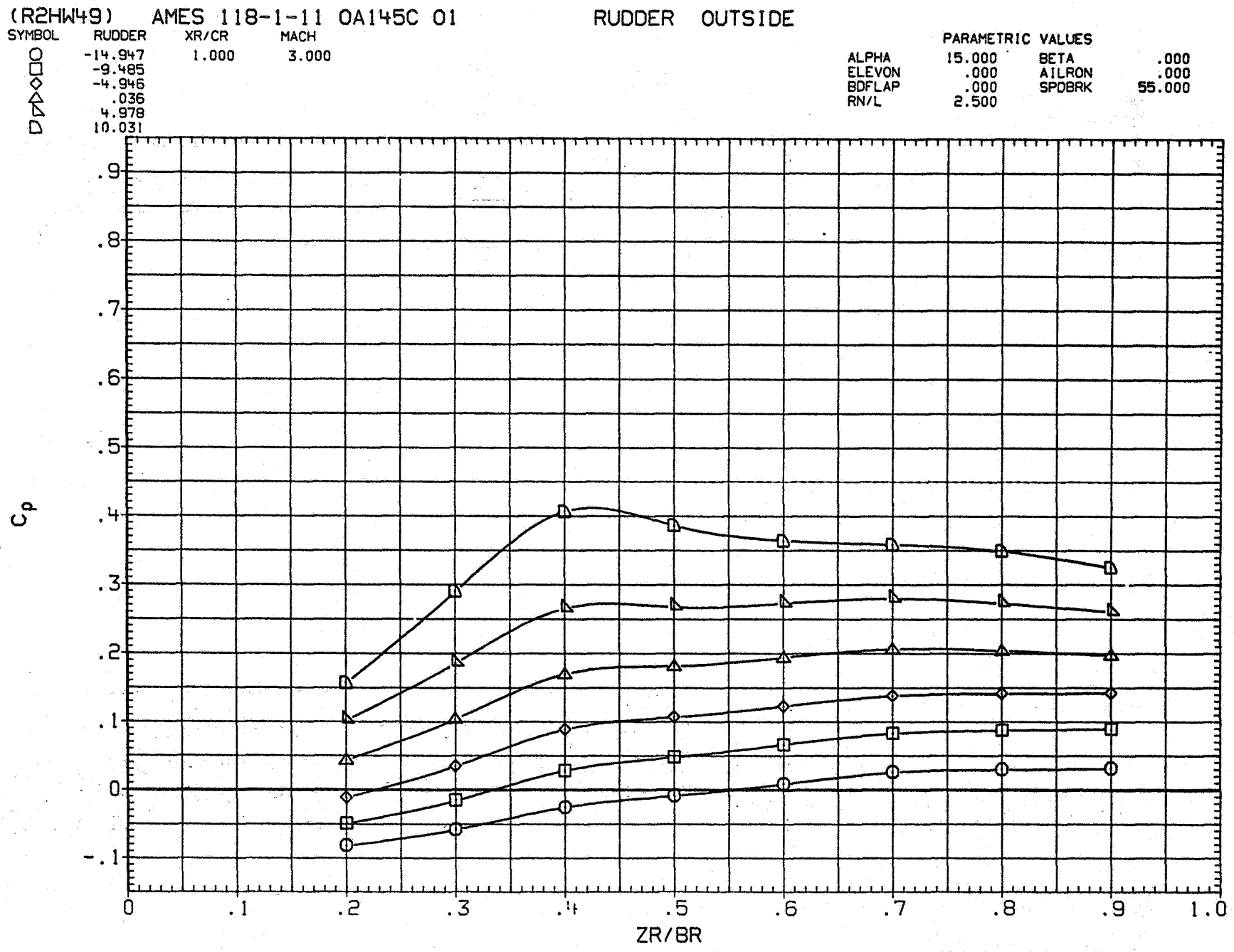

FIG 170 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 55

(R2HW70) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.936	-.200	3.000
□	-9.494		
◇	-4.936		
△	.009		
▽	5.008		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

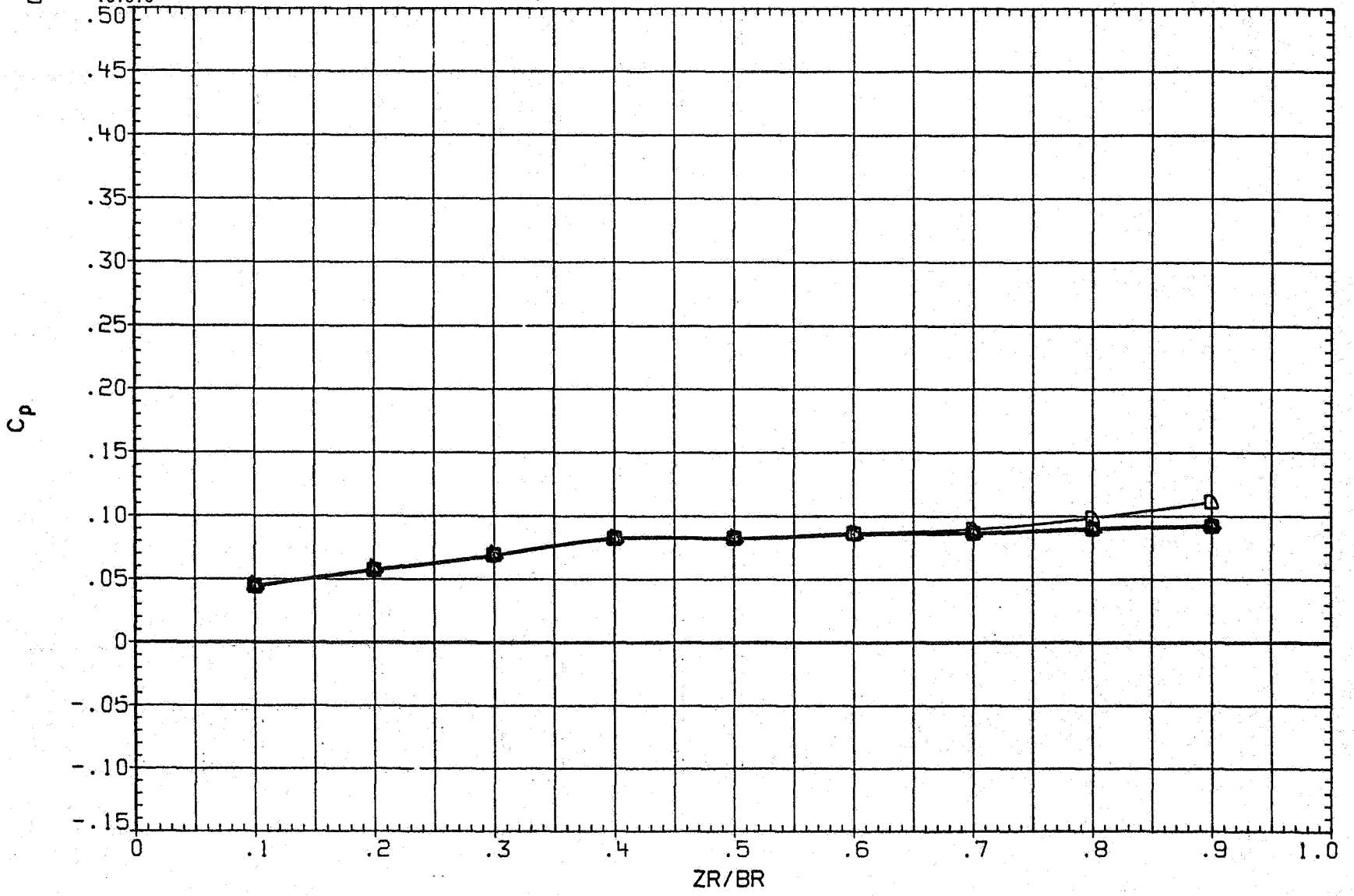

FIG 171 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

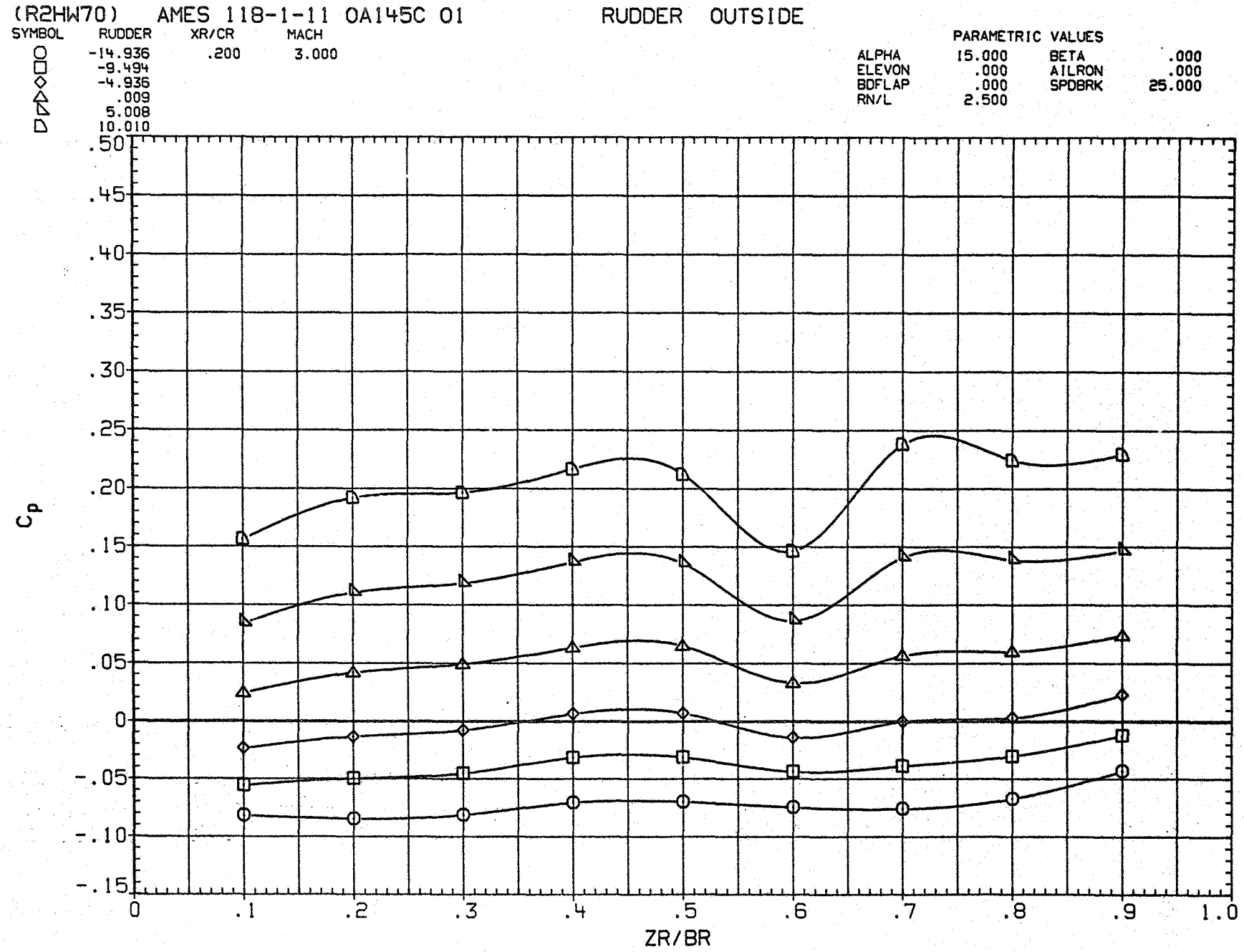

FIG 171 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

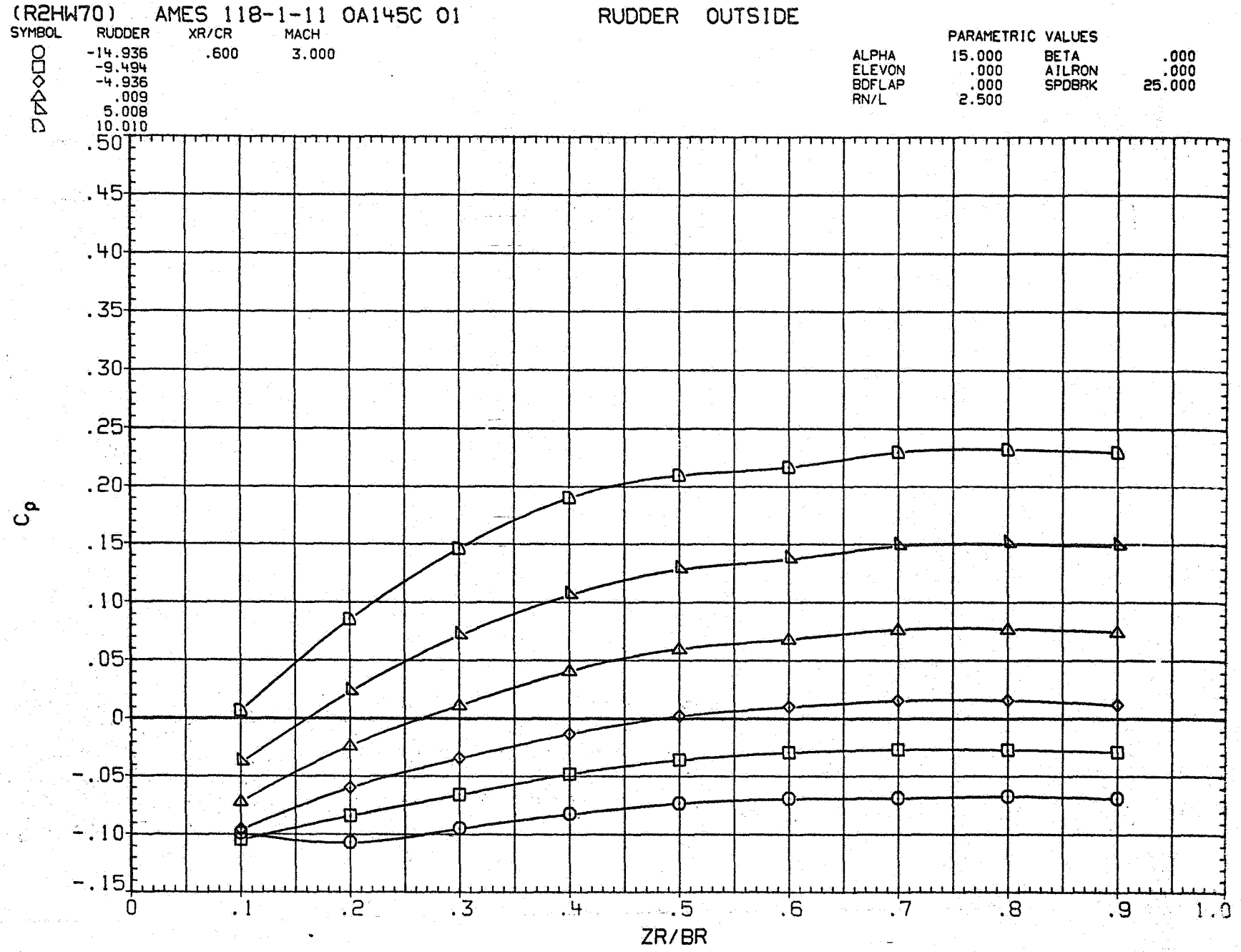

FIG 171 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HW70) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.936	1.000	3.000
□	-9.494		
◇	-4.936		
△	.009		
◁	5.008		
▷	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	25.000
RN/L	2.500		

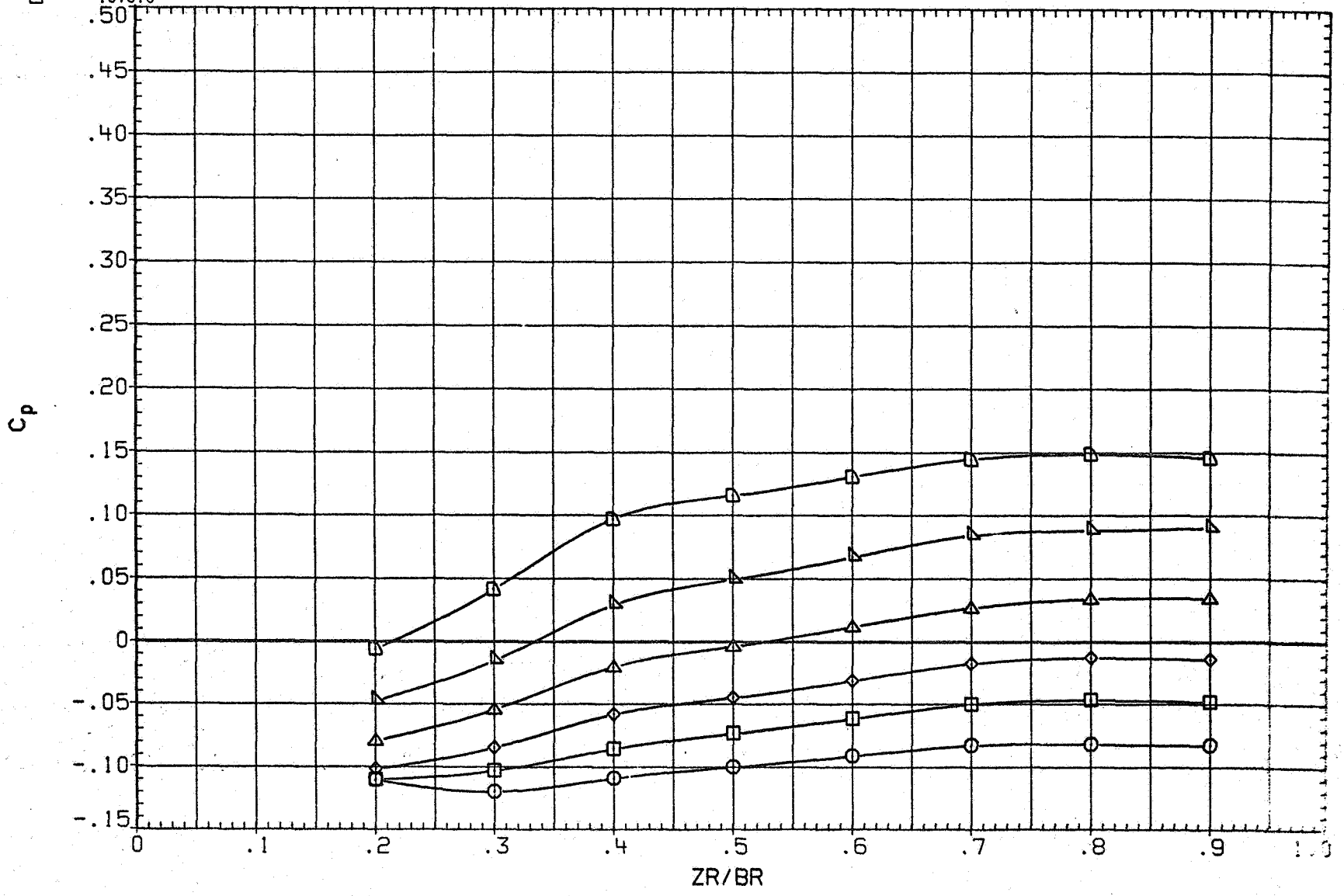

FIG 171 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 25

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.990	-.200	3.000
□	-9.485		
◇	-4.946		
△	.018		
◁	4.998		
▷	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

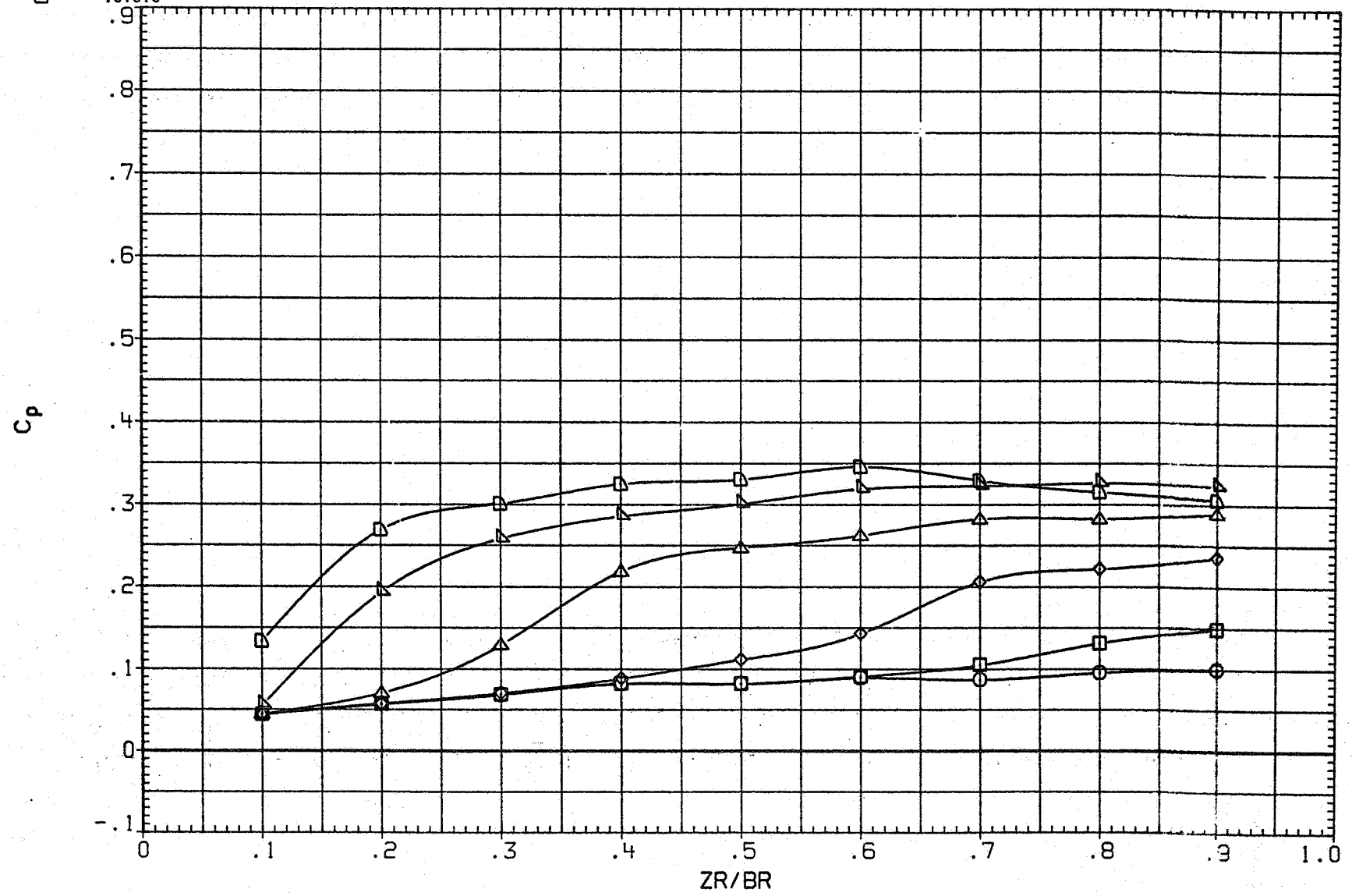

FIG 172 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.990	.200	3.000
□	-9.485		
◇	-4.946		
△	.018		
◁	4.998		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

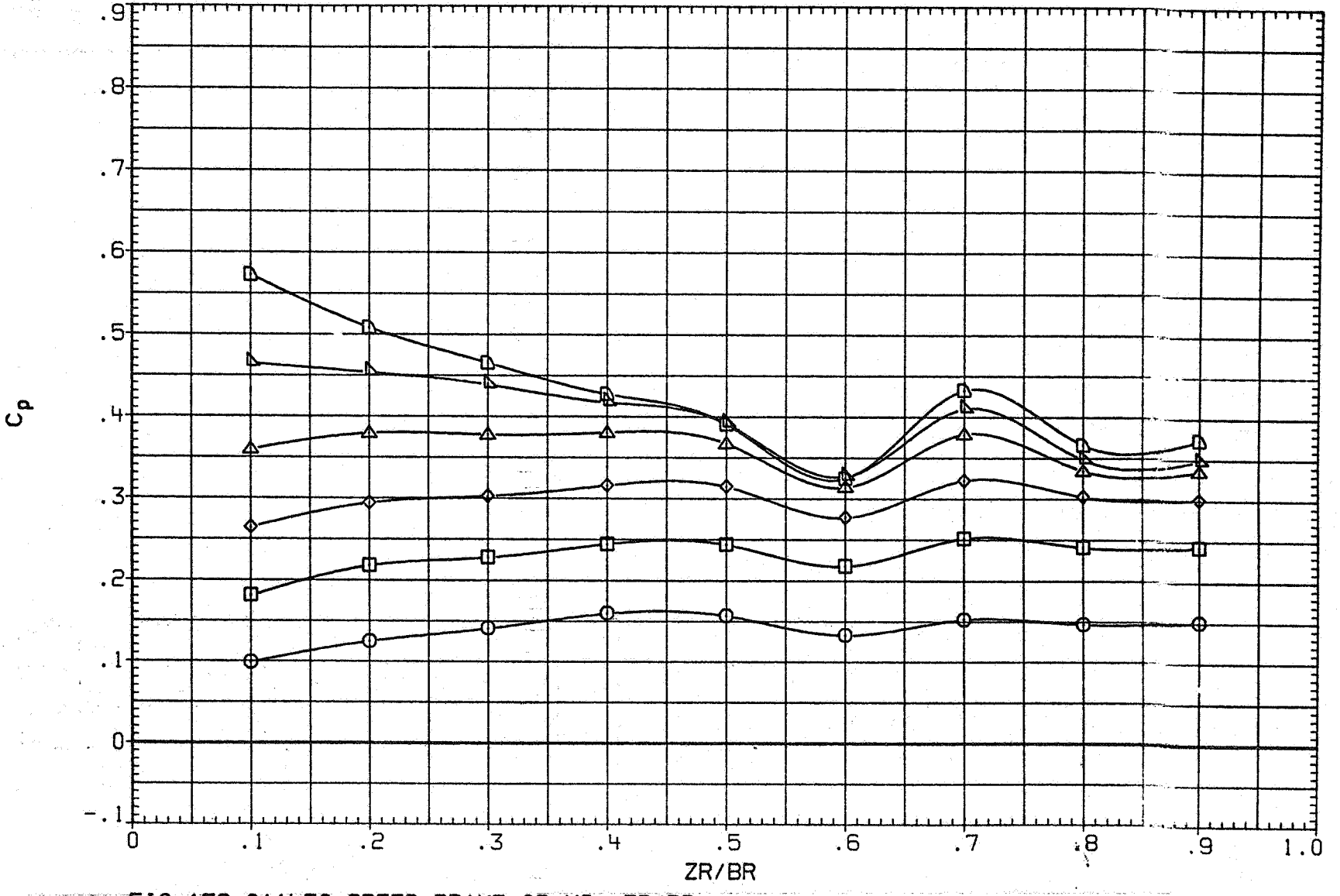

FIG 172 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.990	.600	3.000
□	-9.485		
◇	-4.946		
△	.018		
◁	4.998		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

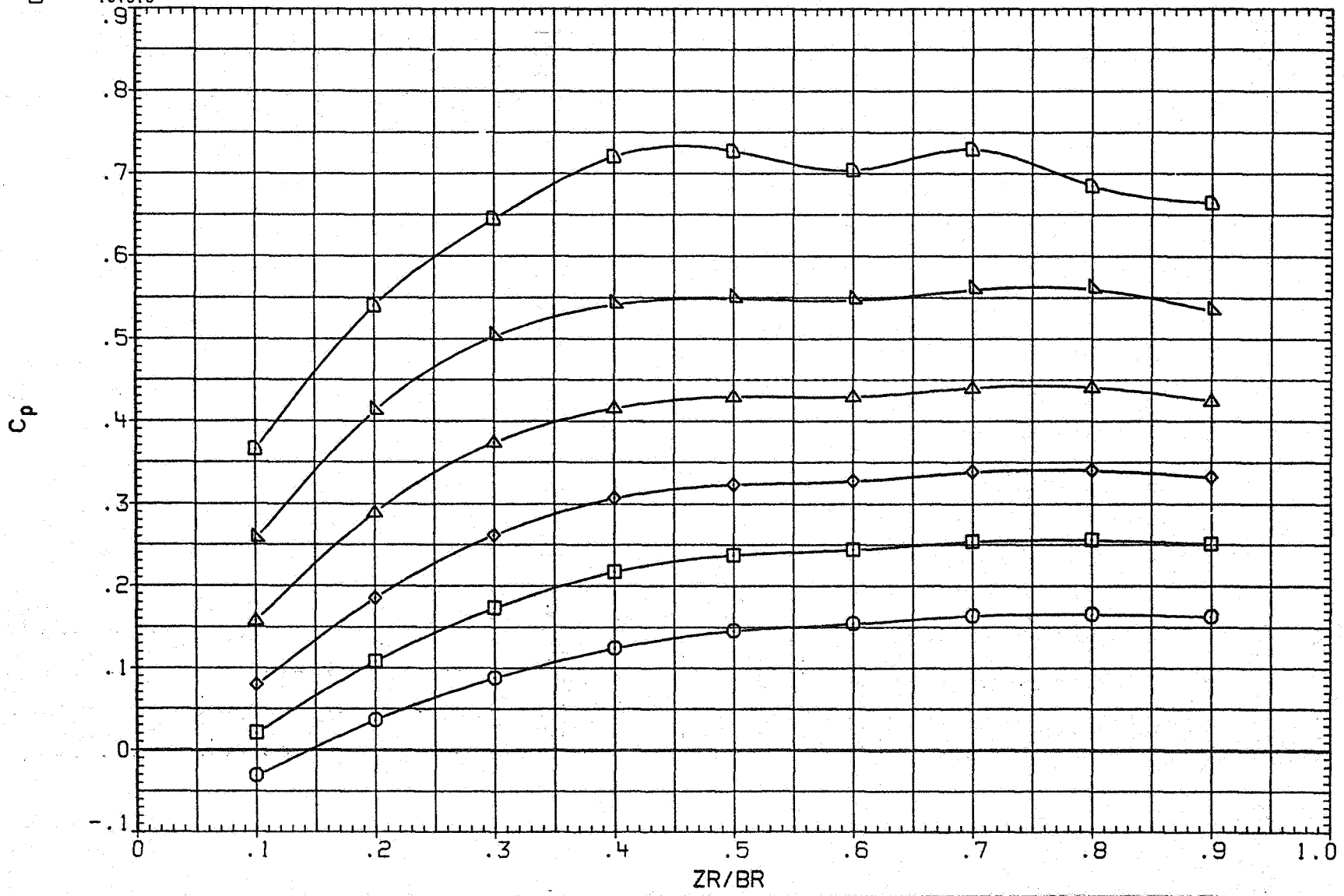

FIG 172 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HW89) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.990	1.000	3.000
□	-9.485		
◇	-4.946		
△	.018		
◁	4.998		
D	10.010		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	70.000
RN/L	2.500		

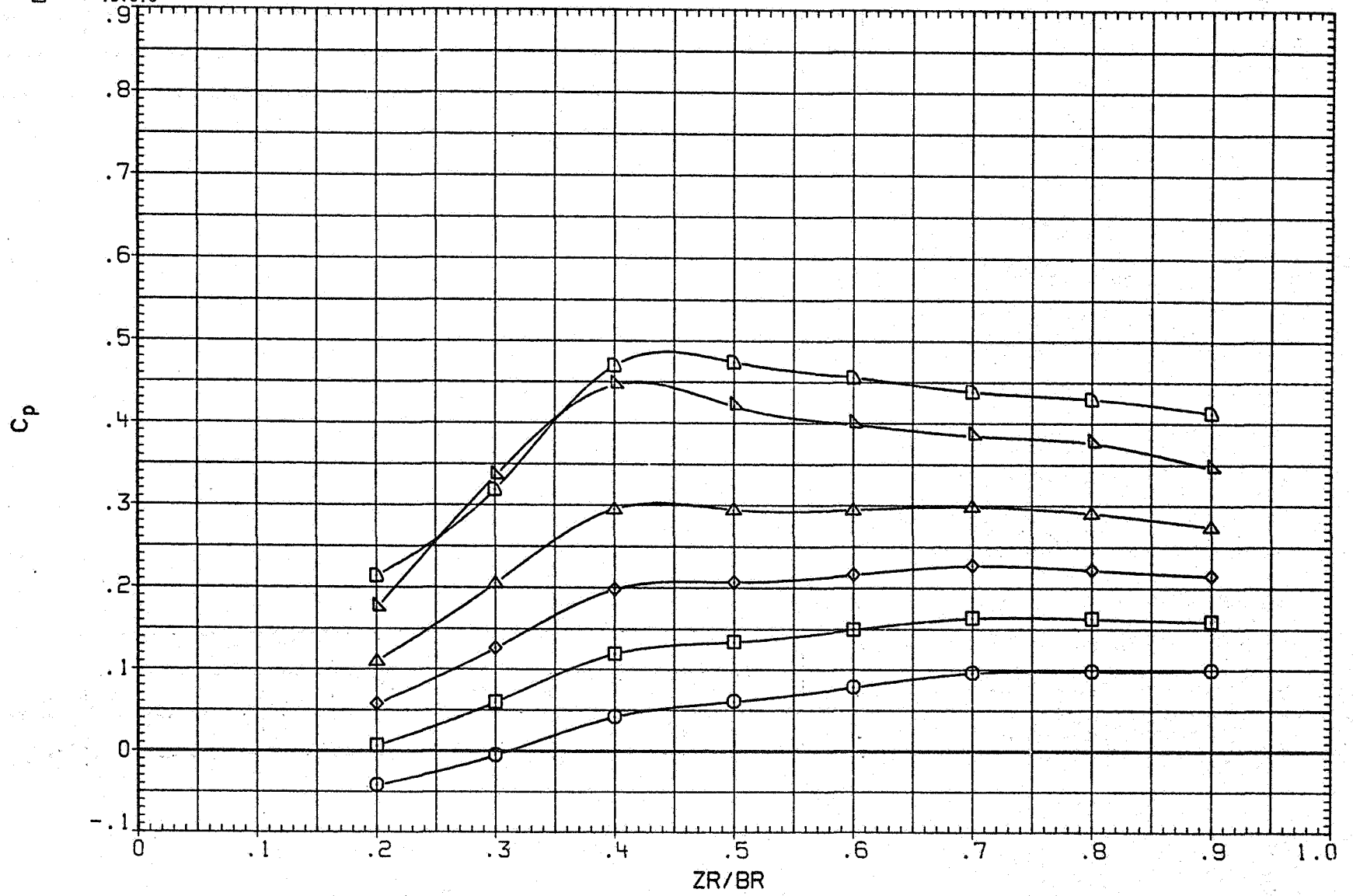

FIG 172 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 70

(R2HWA0) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.968	-.200	3.000
□	-9.494		
◇	-4.926		
△	.018		
▷	5.028		
D	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

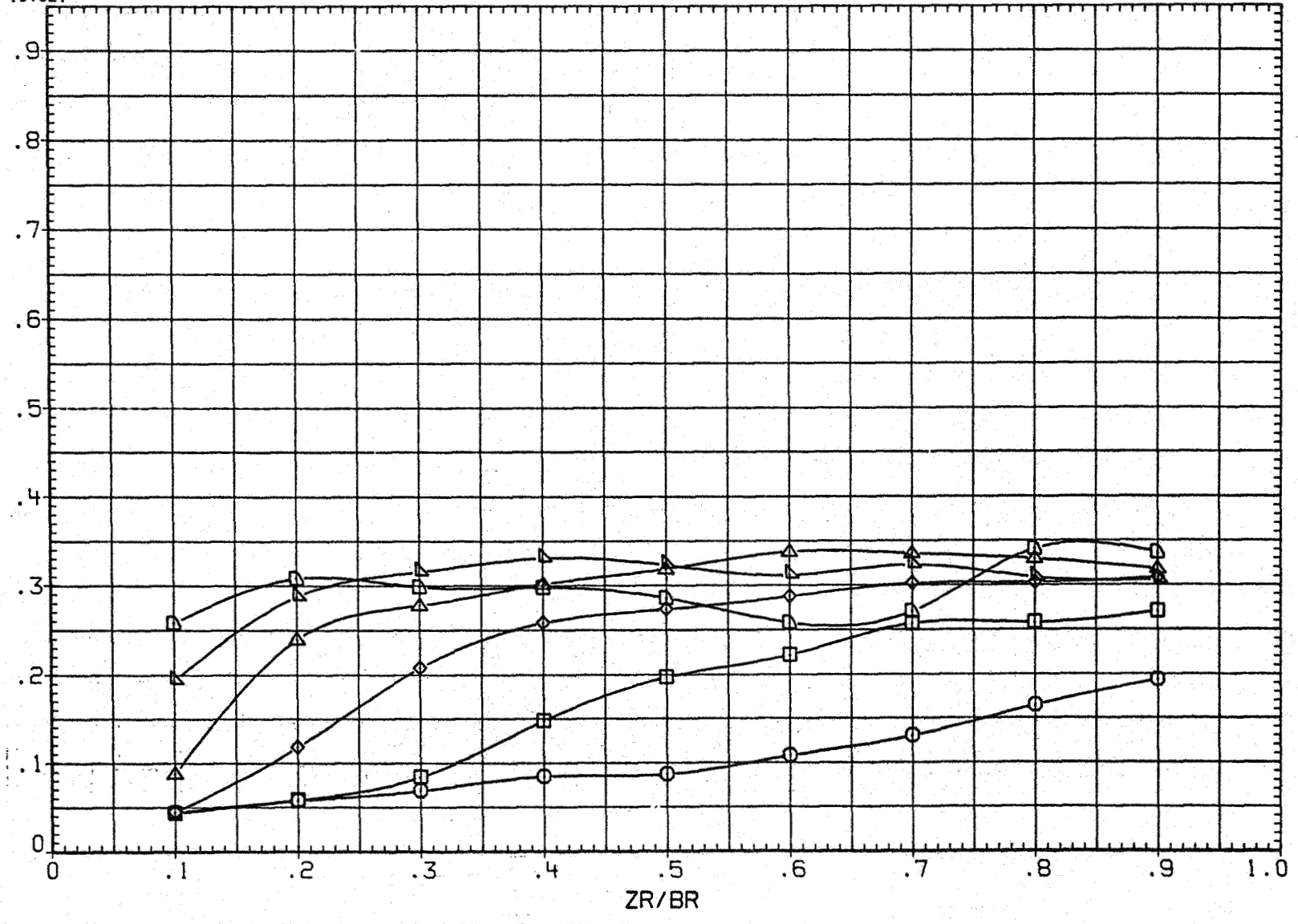

FIG 173 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

(R2HWA0) AMES 118-1-11 0A145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.968	.200	3.000
□	-9.494		
◇	-4.926		
△	.018		
◁	5.028		
□	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

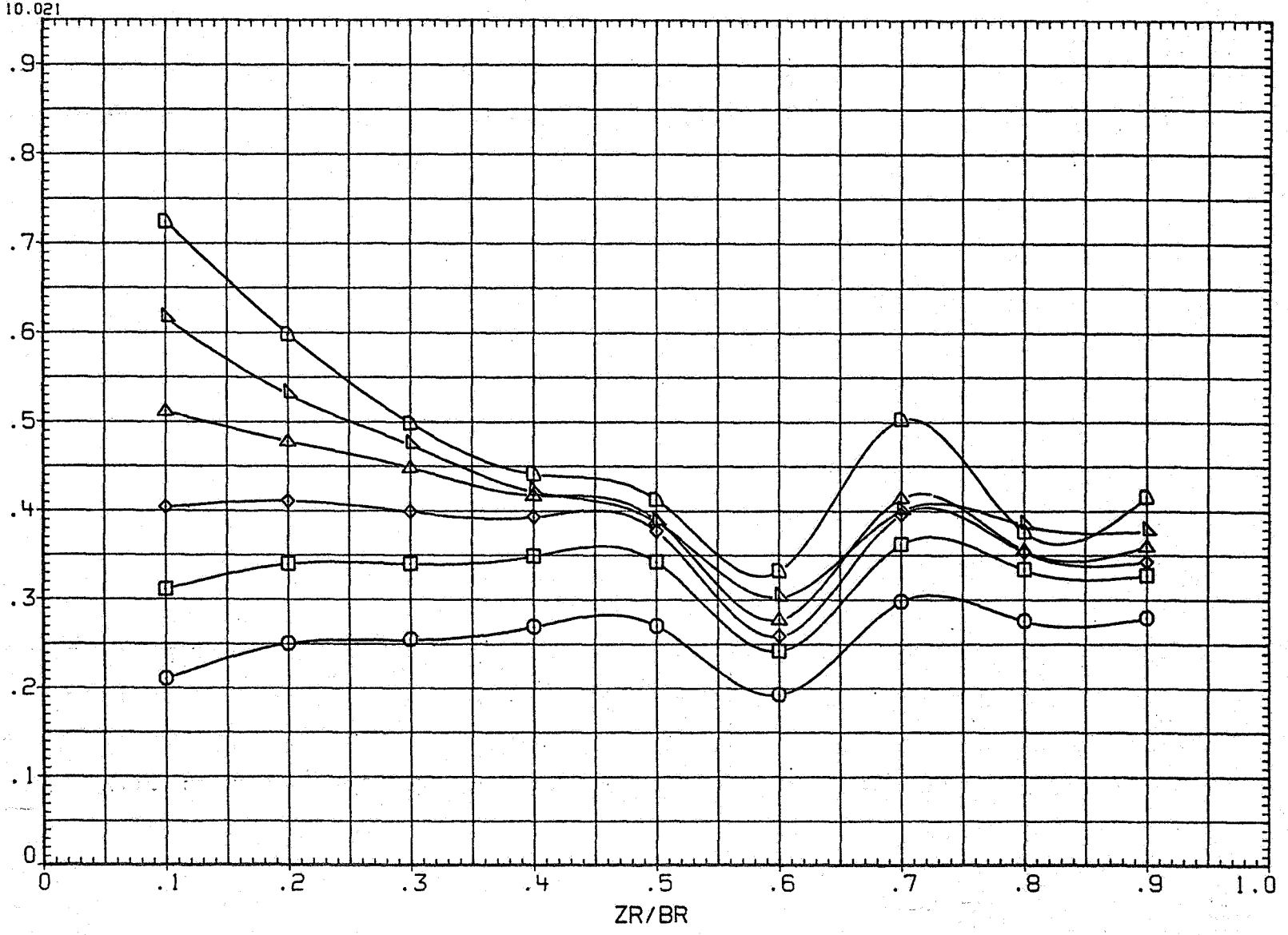

FIG 173 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

(R2HWA0) AMES 118-1-11 OA145C 01 RUDDER OUTSIDE

SYMBOL	RUDDER	XR/CR	MACH
○	-14.968	.600	3.000
□	-9.494		
◇	-4.926		
△	.018		
◁	5.028		
▷	10.021		

PARAMETRIC VALUES

ALPHA	15.000	BETA	.000
ELEVON	.000	AILRON	.000
BDFLAP	.000	SPDBRK	87.200
RN/L	2.500		

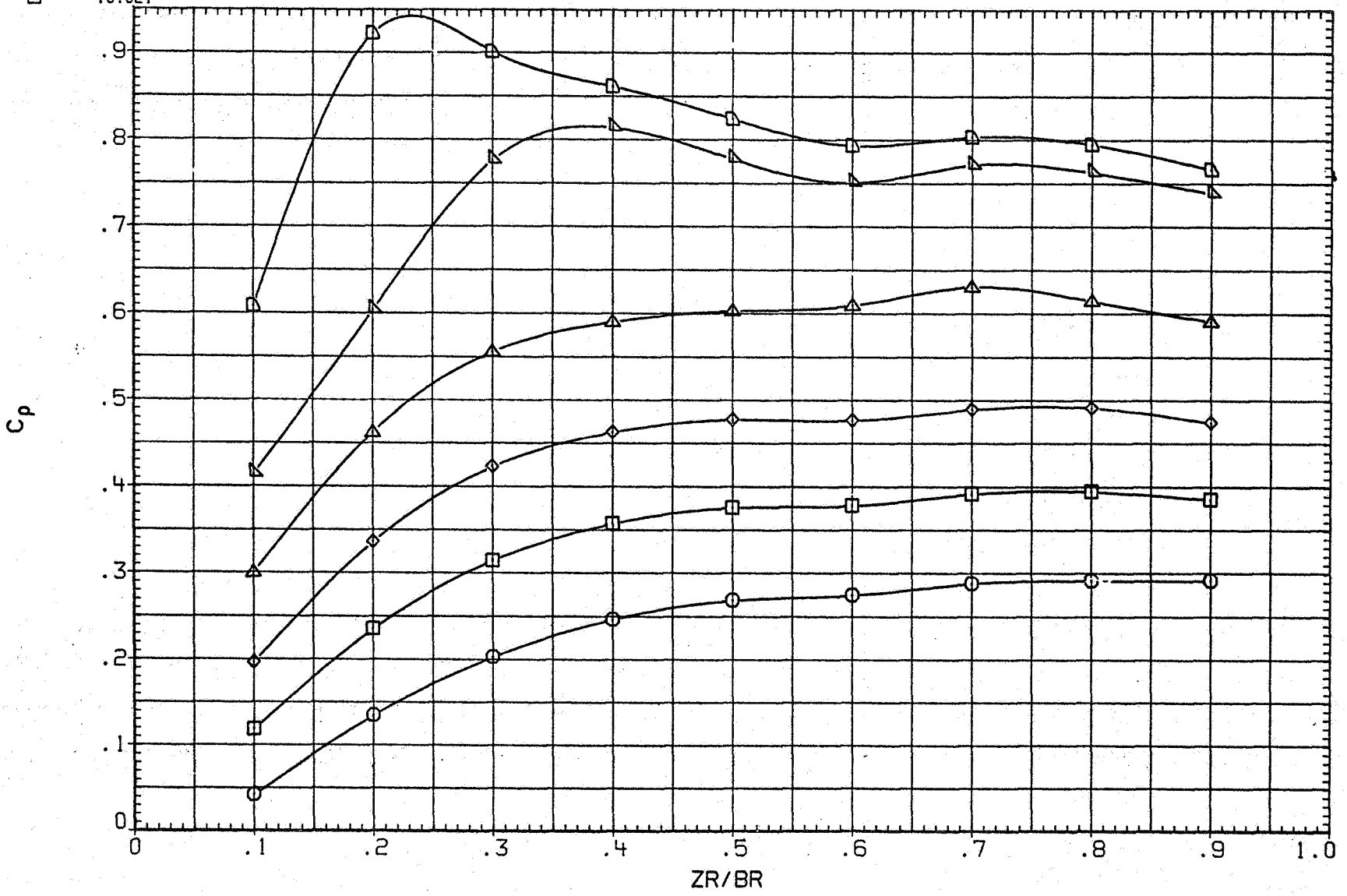

FIG 173 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

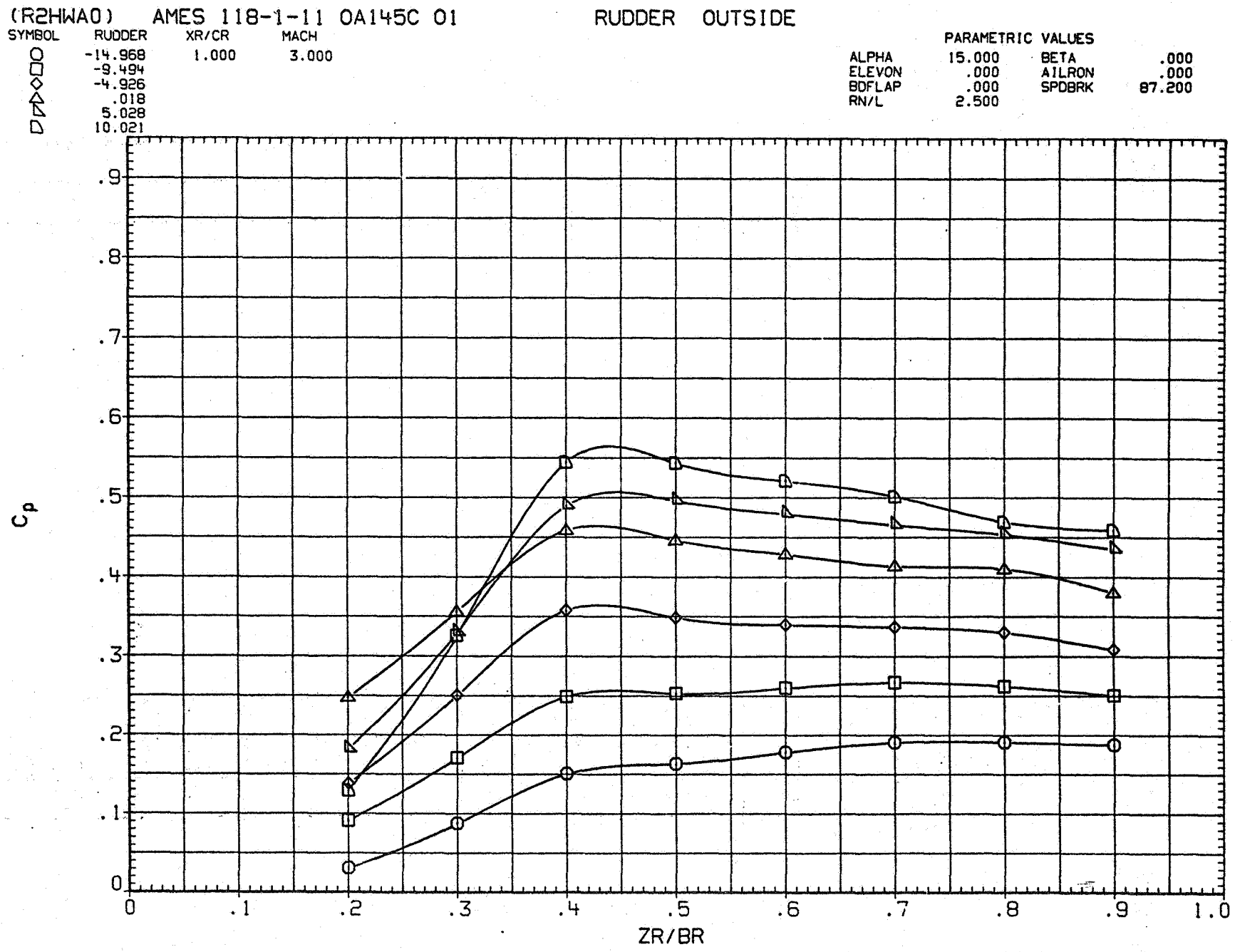

FIG 173 OA145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, RUDDER EFFECT AT SPDBRK = 87.2

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	▷	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

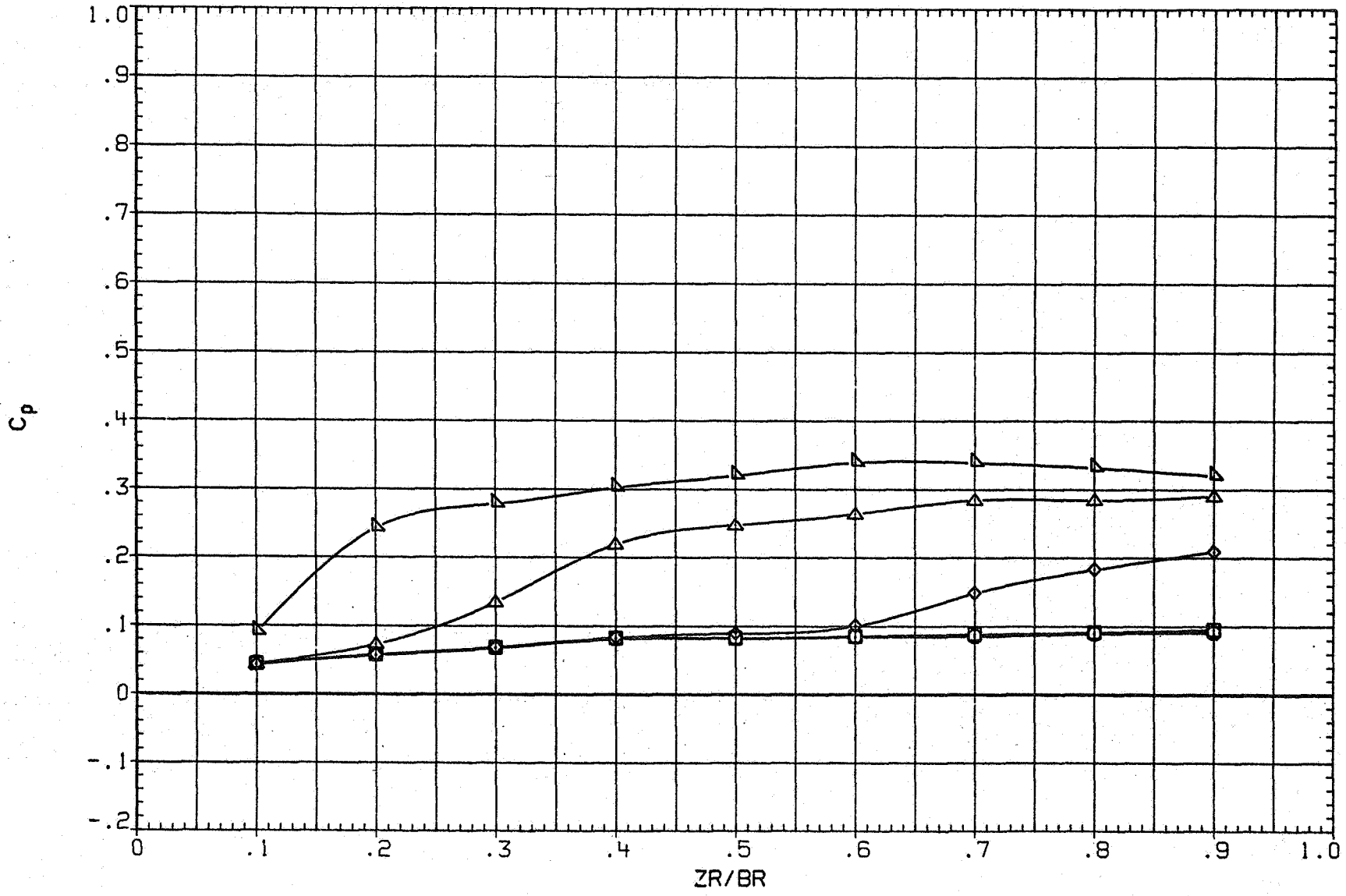

FIG 174 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 XR/CR = -.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	▷	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

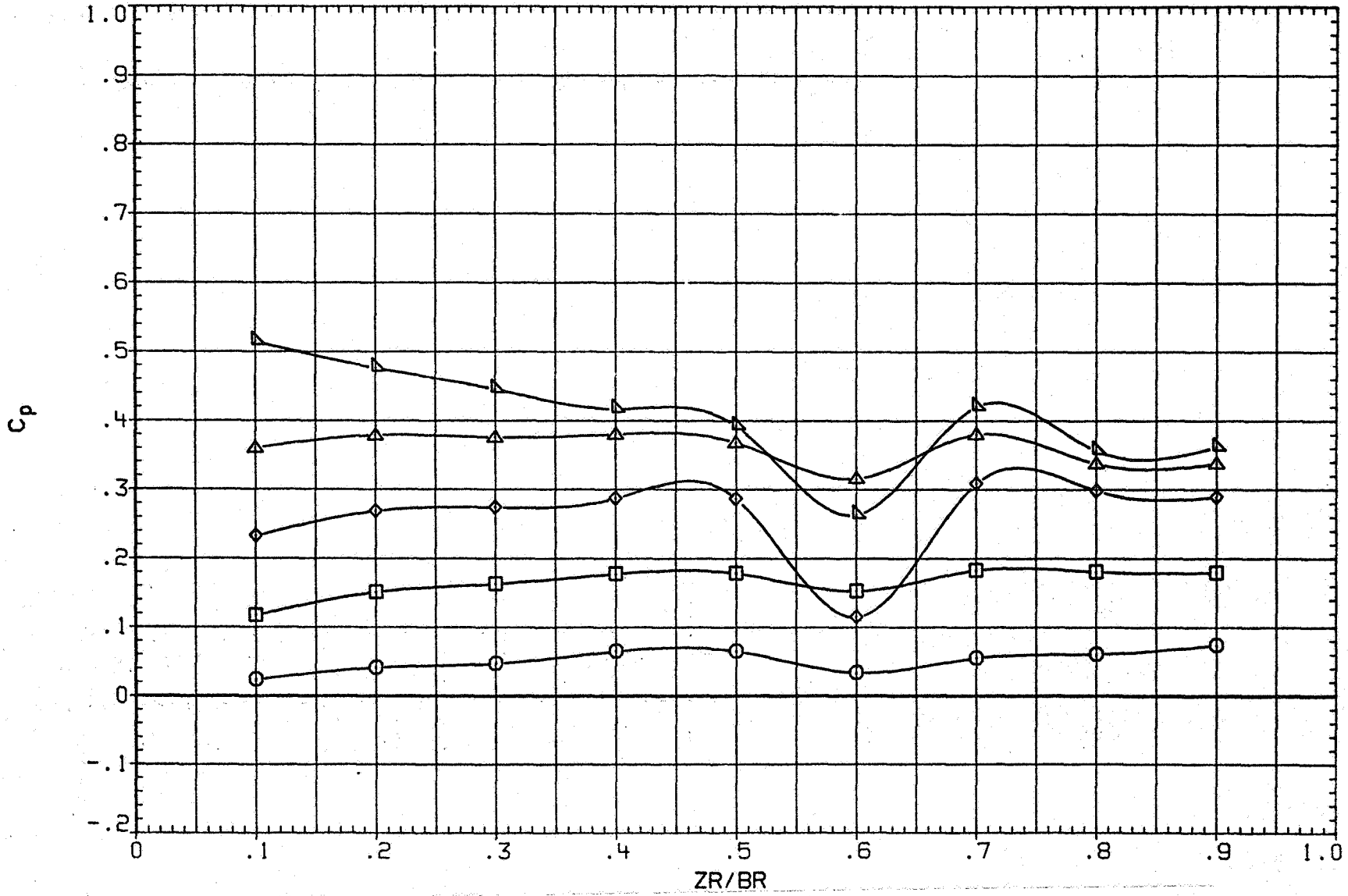

FIG 174 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 . XR/CR = .200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	◁	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

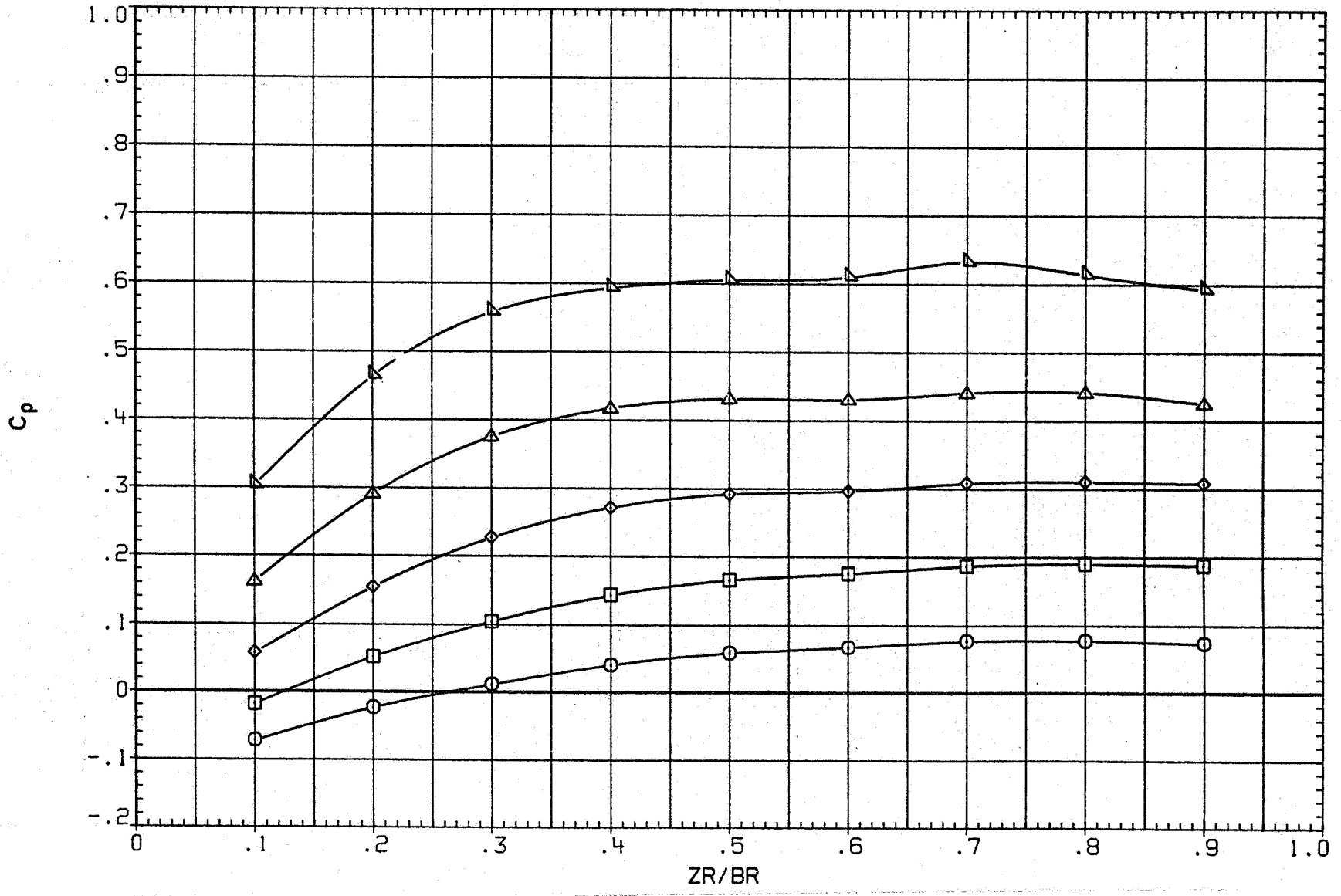

FIG 174 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 XR/CR = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			SPDBRK	ALPHA	RUDDER	RN/L
(R2HW64)	○	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	25.000		.000	2.500
(R2HW76)	□	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	40.000		.000	2.500
(R2HW02)	◇	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	55.000		.000	2.500
(R2HW85)	△	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	70.000		.000	2.500
(R2HW94)	◺	AMES 118-1-11 0A145C 01	RUDDER	OUTSIDE	87.200		.000	2.500

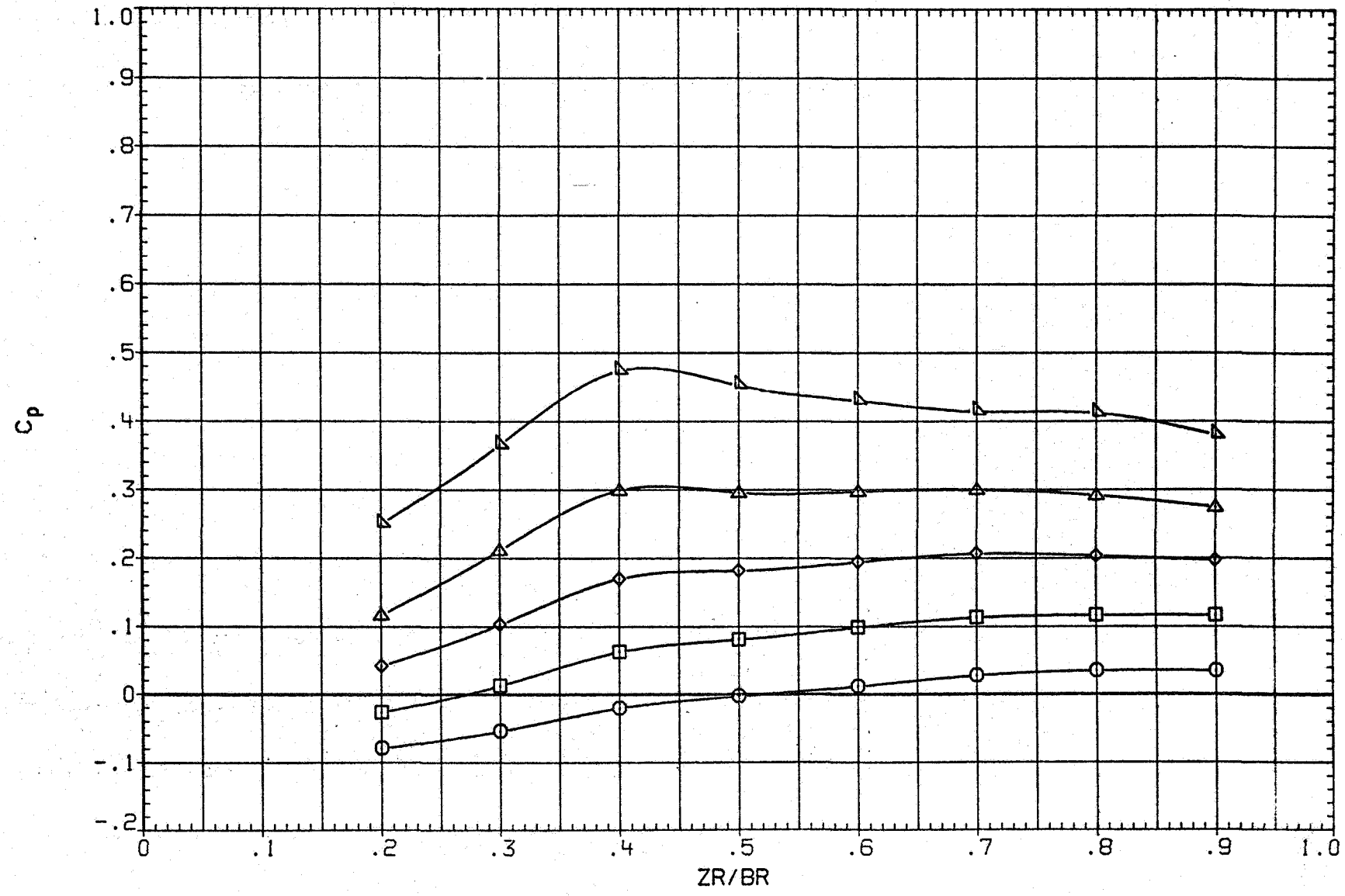

FIG 174 0A145C SPEED BRAKE CP VS. ZR/BR
OUTER SURFACE, SPDBRK EFFECT AT ALPHA = 15, BETA = 0, RUDDER = 0

MACH = 3.000 ALPHA = 15.200 XR/CR = 1.000

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